





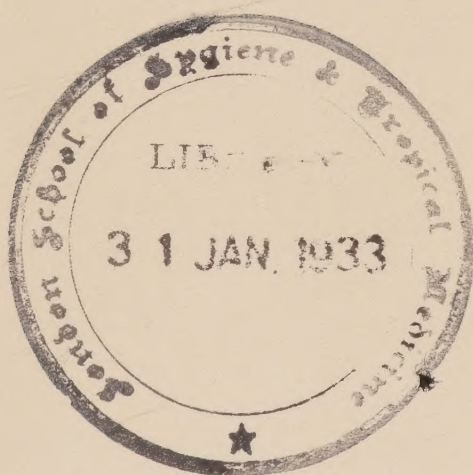
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# JOURNAL

OF THE

## STATISTICAL SOCIETY

OF

LONDON.

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VOL. X.

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LONDON:

JOHN WILLIAM PARKER, 445, WEST STRAND.

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1847.



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JOURNAL

STATISTICAL SOCIETY

# NOTICE.

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VOL. X.



# CONTENTS.

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	Page
Statistics of the Government Charitable Dispensaries of India, chiefly in the Bengal and North-Western Provinces. By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society.....	1
Appendix .....	36
Abstract of the "Statistics of Crime in England and Wales, from 1839 to 1843." By The Rev. WHITWORTH RUSSELL, F.S.S.....	38
On the Duration of Life of Sovereigns. By WILLIAM A. GUY, M.B., Cantab.; Fellow of the Royal College of Physicians; Professor of Forensic Medicine, King's College; Physician to King's College Hospital; Honorary Secretary to the Statistical Society, &c. ....	62
A Review of the Mines and Mining Industry of Belgium. By RICHARD VALPY, Esq., F.S.S. Founded on the Report of the Minister of Public Works to the King, dated Brussels, 1st June, 1842.....	70
Miscellaneous .....	84
'Thirteenth Annual Report of the Statistical Society of London. Session 1846-47 .....	97
Vital Statistics of the East India Company's Armies in India, European and Native. By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society .....	100
On the Accounts of the Bank of England under the Operation of the Act 7 & 8 Vict., c. 32. By J. T. DANSON, Esq., F.S.S., of the Middle Temple .....	132
Statistics of Prussia. By BERNARD HEBELER, Esq., K.C.R.E., F.S.S., His Prussian Majesty's Consul-General .....	154
Sixteenth Meeting of the British Association for the Advancement of Science, at Southampton, September 10th—15th, 1846. Proceedings of the Statistical Section .....	187
Proceedings of the Statistical Society of London .....	188
Miscellaneous .....	189
Moral and Educational Statistics of England and Wales. By JOSEPH FLETCHER, Esq., Barrister at Law, Hon. Sec. Statistical Society of London.....	193
Education in the Mining and Manufacturing District of South Staffordshire; being a Report to the Council of the Statistical Society of London by its Secretaries .....	234
Revenue Statistics of the Agra Government, or North-Western Provinces. By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society ....	243



	Page
On the Mortality among Her Majesty's Troops serving in the Colonies during the Years 1844 and 1845. By LIEUT.-COL. A. M. TULLOCH, F. S. S. ....	252
Statistics of the Sanitary Condition of the Borough of Reading. By JOHN BILLING, Esq., F. S. S., Architect .....	259
A Table showing the Revenue Receipts, Increase of Traffic, Dividends, &c., on Railways for the half-year ending in Dec., 1846. By J. WHISHAW, Esq. F.S.S. ....	262
Summary of Savings' Banks in England, Scotland, Wales, and Ireland .....	266
Pauper Lunacy and Poor's Rate Statistics .....	266
Proceedings of the Statistical Society of London .....	268
Seventeenth Annual Meeting of the British Association for the Advancement of Science, held at Oxford, 23rd—30th June, 1847. Statistical Section ....	269
Miscellaneous .....	270
Prices of the Cerealia and other Edibles in India and England compared. By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society ....	289
The Influence of Education, shown by facts recorded in the Criminal Tables for 1845 and 1846. By G. R. PORTER, Esq., F. R. S. ....	316
Statistical Account of the Markets of London. By JOSEPH FLETCHER, Esq., Barrister at Law, Hon. Sec. Statistical Society of London .....	345
Miscellaneous .....	361

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OBJECTS AND PROGRESS  
OF  
THE STATISTICAL SOCIETY OF LONDON,  
12, ST. JAMES'S SQUARE.

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THE Statistical Society of London was founded on the 15th of March, 1834, in pursuance of a recommendation of the British Association for the Advancement of Science, for the purpose of collecting, arranging, and publishing facts calculated to illustrate the condition and prospects of society, and especially facts which can be stated numerically and arranged in tables. The collection of new statistical materials, it was contemplated, would form only one part of the Society's labours; the condensation, arrangement, and publication of those already existing, whether unpublished, or published only in an expensive or diffuse form, or in foreign languages, being a work of equal usefulness. It was also a prominent object of the Society to form a complete Statistical Library as rapidly as its funds would permit.

Such was the purport of the original prospectus; and now that the Society is in the tenth year of a prosperous existence, its Fellows have every reason to revert with satisfaction to this outline of its objects; for it is very seldom that the first designs of a public association for the advancement of science are all carried out with so much success as has attended upon those which that prospectus describes. The resources of the Society were, in the first instance, chiefly devoted, under the direction of its Committee, to the collection of new statistical information, and to this great purpose a part of its funds is still appropriated. Its monthly meetings have cultivated among its Fellows an active spirit of investigation, and brought out the valuable results of much individual labour. Its journal has fulfilled the purpose of condensation and publication; and the valuable books and papers which have already been collected form a library of facts of no mean utility.

The Sixth Annual Report of the Society, which contains an elaborate description of the scope and system of its labours, divides Statistics into the following chief sections:—

I. The *Statistics of Physical Geography, Division, and Appropriation*; or, geographical and proprietary Statistics.

II. The *Statistics of Production*; or, agricultural, mining, fishery, manufacturing, and commercial Statistics.

III. The *Statistics of Instruction*; or, ecclesiastical, scientific, literary, university, and school Statistics.

MARCH, 1847.



IV. The *Statistics of Protection*; or, constitutional, judicial, legal, military, and criminal Statistics.

V. The *Statistics of Life, Consumption, and Enjoyment*; or, of population, health, the distribution and consumption of the commodities of life, and public and private charity.

All the departments of Statistics above described may be cultivated to the development of as many branches of moral science, and to the attainment of that true insight into the actual condition of Society, without which the application of remedial measures is purely empirical.

Under this conviction, the original prospectus announced the intention of the Society carefully to exclude all "opinions" from its publications; not, assuredly, with the view of discouraging the proper use of hypothetical reasoning, but for the purpose of devoting the pages of its transactions to facts, and not to systems. In the pursuit of almost every investigation, the inquirer will adopt some hypothesis; but its truth and completeness, or its fallaciousness and insufficiency, must be demonstrated by observation and experiment. It is therefore the main purpose of scientific associations to call forth and register the results obtained by these processes; and observation in the wide field of human interest supplies those "facts calculated to illustrate the condition and prospects of society," which it is the design of the Statistical Society to "collect, arrange, and publish."

The pursuit of Statistical inquiries has already made such progress, not in England alone, but throughout Europe, as henceforth to be a necessity of the age, and one of its most honourable characteristics. Thus errors as to the actual condition and prospects of society are daily exploded, and more just data are supplied to guide the exertions of the philanthropist, the judgment of the legislator, and the speculations of the reasoner. The labours of the Statist, indeed, can alone assure us that we are really advancing in that knowledge of human interests in the aggregate to which it is no longer possible to deny the name of Science.

The Statistical Society of London consists of an unlimited number of Fellows, admitted by ballot, without any entrance fee, but paying a subscription of two guineas per annum; of foreign Honorary Members; and of Honorary Corresponding Members, resident out of the United Kingdom; and it carefully cultivates a connexion with the several local societies of the Empire, and a correspondence with those of Foreign Countries. Fellows elected in or after the month of June are exempt from paying their subscription for the current year. The Journal of the Society, published quarterly, is distributed gratuitously to all the Fellows; its library is one of circulation; and its Rooms and its Monthly Meetings are of great resort.



# QUARTERLY JOURNAL

OF THE

## STATISTICAL SOCIETY OF LONDON.

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MARCH, 1847.

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*Statistics of the Government Charitable Dispensaries of India, chiefly in the Bengal and North-Western Provinces.* By LIEUT.-COLONEL W. H. SYKES, F.R.S.

[Read before the Statistical Section of the British Association, September 15, 1846.]

SOME time since I submitted to the Statistical Society of London a compendious view of the origin, progress, and present condition of the Educational Institutions of the East India Company in India, for the instruction of native youth, which the Society did me the honour to publish in its Journal. My object in the present paper is to illustrate the practical results of such institutions in one branch of the knowledge communicated, and to prove what a rich harvest of good the people of India are already reaping, and how happily the objects of Government are fructifying. It was during the administration of that enlightened and benevolent nobleman, Lord Auckland, that the noble institutions, described in this paper, had their origin; and it was in a letter, dated 27th April, 1838, that the Government of India sanctioned the establishment of Dispensaries in some of the large towns in the Bengal Presidency. They were to be under the Civil Assistant Surgeon of the station, who was to be allowed fifty rupees per mensem, including his vaccination duties. An educated young man from the Medical College at Calcutta, on a salary varying from 40 to 100 rupees, but latterly fixed at 100 rupees, was to be placed in charge of the Dispensary. A small number of beds for extreme cases and for surgical operations were attached to each Dispensary, and the appointment of boys, as apprentices, for vaccine objects was suggested. It was proposed to limit the monthly charge for each institution to 250 or 300 rupees. The Dispensary was to be furnished with medicines and surgical instruments from the Government stores, and instruction was to be given to any youths who might desire to attend. The native assistant might practise privately.

The judge, magistrate, and civil surgeon were to be a standing committee for the management of the Dispensary, and were to correspond with the Medical Board. The Revenue Commissioners were to have a voice when present; the civil surgeon to be *ex-officio* secretary, and the committee might invite the co-operation of any native gentlemen.

The above arrangements were confirmed by the Court of Directors in a dispatch to Bengal of the 13th July, 1842, directing, however,



that the cost should not exceed a certain fixed sum, unless the natives assisted by subscriptions.

The Medical Board, in a letter to Government, dated 31st October, 1842, speak in confident terms of the prospects of success of the institutions, and say there are more native sub-assistant surgeons than can be employed in the service, "and, if after the trouble and expense which have been incurred in educating them at the new medical college, they be not sufficiently qualified, we must despair of ever seeing that object effectually attained."

What these qualifications proved to be the following paper will show.

The expectation of aid from the natives was not disappointed. The rajah of Burdwan, on the object being made known to him, immediately allotted 200 rupees per mensem for a Dispensary in Burdwan, and others in like manner have come forward.

The sub-assistant surgeons in charge of the Dispensaries were not all natives, although the great majority were so, some being of half-blood, and having probably a familiarity with the English language. The reports and returns were to be made half-yearly by the sub-assistant surgeons themselves; and as I shall have occasion to read a report from one of the educated European surgeons, and one from a native sub-assistant surgeon, the Section will have the opportunity of judging whether they could distinguish the one from the other by the phraseology. But the reports are not limited to the communication of information on medical subjects; they contain also much interesting and valuable matter on meteorology; the habits, customs, and prejudices of the natives; the state of drainage of towns, and physical characteristics of localities. The reports, so sent in, were transmitted by the superintending surgeon to the Medical Board at Calcutta, and by the latter forwarded to Government; and the Government, with sound judgment, directed them to be periodically printed for the use of the Court of Directors, the Government of Bengal, and the Medical Department generally.

I shall first take up for notice the tabular statements from the several Dispensaries, reserving for the close of this paper the text of the reports. In the initiation of extended objects there are generally considerable difficulties, and occasional want of uniformity of action; it is only after a period of working that the discrepancies are observed, and remedies applied. It does not appear that a common form of tabular return was supplied to the several Dispensaries on their establishment, some arranging the diseases treated alphabetically, and others classifying them systematically, according to the natural relation of the diseases, which appears to be the form finally adopted; but even after this form had superseded the alphabetical arrangement, in more than one Dispensary the former imperfect form was had recourse to, necessarily preventing that rigid comparison of progress and result in details, without the capacity for which tabular statements are almost valueless. The final form adopted arranged diseases under the great heads of the "Digestive Function," of the "Respiratory Function," of the "Sanguineous Function," of the "Nervous Function," of the "Sexual Function," of the "Excrement Function," from "External Violence," and a column for "Alii Morbi," which appears a very comprehensive one indeed, although under the great headings no less than fifty-eight diseases

are enumerated. The diseases, under the several heads, are shown in the tables.

As it was originally intended that each Dispensary should have a house-practice for the most serious cases, and out-practice for the generality of diseases, so it was intended that there should be separate returns of the house and out-practice; nevertheless there are but four house returns from Moradabad, a fifth not adaptable, and but five of out-patients. From Furruckabad no house return at all; from Moorshedabad only four instead of six; Allahabad one instead of six, and from Pooree five instead of six. In all these the house-patients have been included with the out-patients, and continuous comparisons therefore interrupted. It was my intention to have given the complete aggregate result of the practice at the several Dispensaries from the first adaptable tables of the second half of 1840, until the reports ending the 31st January, 1845; and it was only after having gone through the labour of extracting the figures from the several tables, with a view to final results, that I found that from the 31st July, 1842, until the 31st July, 1843, and from the 31st January, 1844, to the 31st July, 1844, the reports transmitted to the Court of Directors consisted of mere meagre statements from the Dispensaries, without tables, although from the following passage of the letter, dated December 1, 1843, of the Medical Board to the Deputy Governor of Bengal, Mr. W. W. Bird, forwarding these statements, they must have been of more than usual value:—

“We have on this occasion deemed it right to extract more largely than usual from the reports of some of the sub-assistant surgeons, both as they comprise matter of somewhat more than common interest, and as by permitting them occasionally to speak for themselves, a better means is afforded of judging of the increasing usefulness or otherwise of these institutions than any other that we can furnish, and of the progressive advancement in professional knowledge of the sub-assistants, and facility in the expression of their sentiments in the English language.”

This hiatus is to be regretted, and I felt half disposed to abandon my labour; but on reflection, as my object was rather to show the practical result of our educational system, than to follow the medical practice of the several sub-assistant surgeons, I was induced to persevere; for though I could not show the whole amount of good resulting from the education given to these young men, I could certainly show a very great proportion of it. But the medical man in Europe who may inspect the tables with medical objects, may find occasion to regret the omissions, and want of continuity in the returns. This explanation will account for the blanks for half years, which will be found in the returns of all the Dispensaries. In the cases, however, of Furruckabad, Shahjehanpoor, and Jubbulpoor, the blanks are partially accounted for by these Dispensaries not being contemporaneously established with the rest.

As the returns comprise 267,456 cases treated, it may very properly be asked, what test is there of the accuracy of the returns made by young natives, who had every possible motive for exaggerating and enhancing the amount of their own labours and success, whose bread, in fact, depended upon this success? Setting aside, however,



the daily supervision of the civil surgeon of the station where the Dispensary was located, the returns themselves bear internal evidence of *bona fides*. How easy was it for the sub-assistant surgeons, particularly with out-patients, to put down most of those who ceased to attend as cured; nevertheless 94,618 are put down as relieved only, or ceased to attend. How easy was it for them, in the treatment of diseases which the world knows to be of almost certain cure, such as those of the skin, gonorrhœa, syphilis, &c., to have put them all down as cured; and no one would have questioned the accuracy of the return for a moment; nevertheless not two-thirds of these cases are returned as cured. It might have been expected also with the natural vanity of young men just started into practice, that there would have been some little show-off, some manifestation of a successful treatment of difficult cases; of curing diseases that are not readily affected by medicine or art; but there does not appear to be anything of the kind, excepting in two returns, which may be attributed to typographical errors. Elephantiasis, scrofula, tetanus, epilepsy, paralysis, anasarca, and leprosy, which are rarely manageable in the hands of the European scientific medical man, appear by the returns equally unmanageable in the hands of the native sub-assistant surgeons. There are in the returns numerous typographical errors; many of these have been corrected from the body of the return itself; and the others only occasion an error in the individual return; which is not appreciable in the sums total of all the returns. On the whole, therefore, the returns may be viewed with confidence for their general accuracy. It is not my object to enter into any medical question at all; my object is simply to show the amount of good done, and I might confine myself, therefore, to giving the total results; but the Section may expect from me some cursory observations upon the general features which the tables exhibit; and to this I will limit myself, referring the medical man to the tables themselves for details. I have arranged the tables so that a progressive view may be taken from Dacca and Chittagong, in the low lands of the East, through the low lands of Bengal *viâ* Bhowareepoor, Pooree, Moorshedabad, Patna, and Benares, to the Upper Provinces *viâ* Allahabad, Agra, Delhi, Shahjehanpoor, &c., thus separating what are called the Lower from the Upper Provinces of the Bengal and Agra Governments, that medical men, or others if so disposed, may investigate as far as the tables supply the means, the effect of climate in developing particular diseases. One element, however, to assist the judgment in the investigation, is wanting, and that is the population of the respective neighbourhoods of the several Dispensaries. In only one instance is it given, that of Allahabad, and I have attached it in the Appendix. Confining myself to the broad features, I may state, that 267,456 cases, including house and out-patients, were treated—of this number 168,871 were cured, 2,417 died, and 96,168 ceased to attend, and the results were not known. Intermittent fevers amounted to 20,028, and with the minor accompaniment of 4,590 remittent and 6,807 continued fever cases, take the lead of all other diseases both in the Upper and Lower Provinces, excepting only rheumatism, of which there were acute 9,087, and chronic 19,928 cases. The intermittent fever obtained at all the Dispensaries as a leading disease; the remittent fever very slightly at Moorshedabad, Pooree,

and Chittagong, in the low lands, but considerably at Dacca, also in the low lands. In the Upper Provinces scarcely at all at Agra and Mutra, but considerably at Delhi and Bareilly. The continued fever appears to have been pretty equally felt, excepting at Moorshedabad and Pooree, in the low lands, and Cawnpore, in the Upper Provinces. Rheumatism, both chronic and acute, prevailed at all the Dispensaries, the only exception for the acute being Moorshedabad and Pooree, in the Lower, and Agra and Mutra, in the Upper Provinces, at which two last places there is not a single entry.

The next great features are ulcers and abscesses. The former rival in amount (20,615) the intermittent fevers, and prevail in all climates, but are readily curable. Phlegmon and abscesses (10,418) are half as numerous as the intermittent fevers.

Diarrhœa appears to prevail generally, but not with any intensity, amounting (9,123) to about two-fifths of the intermittent fevers.

Dysentery, both acute and chronic, appear to be moderate; the former 3,603, and the latter 3,377; the two together barely constituting a third of the intermittent fevers.

Patna, and Benares, and Bareilly suffered most from the former, and Benares and Delhi from the latter forms. Enlargement of the spleen (6,484) appears a common accompaniment, or rather result, of fever cases, but it decidedly prevails in the Lower Provinces rather than the Upper; the only exceptions being Allahabad and Delhi, and at both these places fever prevailed in more than an ordinary degree. The next great feature, or rather the chief feature, as far as numbers go, is that of the comparatively harmless diseases of the skin (25,733). These are common to all the Dispensaries, whether in the Lower or Upper Provinces, and in some few cases they have proved so intractable that death has ensued. A melancholy feature of the returns is the large amount of syphilitic and analogous affections, primary and secondary, amounting respectively to 13,261, 7,658, and 6,694, and frequently being of so inveterate a character as to occasion death. A singular feature of the returns is the comparatively enormous amount of mechanical injuries: of contusions, 1,548, dislocations, 712, incised wounds, 2,588, fractures, 737, and burns, 517: total, 6,102. This scarcely supports our ideas of the gentle, resigned, and placable Indian, but would rather lead us to believe in a good deal of pugnacity and violence, with no indisposition to occasion broken heads and broken bones; it is but fair to admit, however, that many cases are returned as wounds, &c., from elephants and tigers. A very affecting accident is mentioned by the sub-assistant surgeon of Benares, Esher Chunder Gangoolie, under the head of Burns, which terminated fatally; he says—

“The second case was that of a man who fell into the funeral pile of his *only* son. He was burnt all over the front part of his body, and on being brought to the hospital endeavoured, with all the strength that was left him, to prevent the application of external remedies; he also refused to take any internal medicine, and died next morning.”

Such cases of ardent attachment exhibiting itself in other forms than the above, are by no means uncommon, and I have witnessed several. Even in cases of Suttee I have known the widow resist, with all her power, attempts to remove her from the funeral pile of her husband. Both bilious and spasmodic cholera appear but as minor items in the



returns ; they appear to have been treated *simultaneously* in several of the Dispensaries, though the mortality from bilious cholera bore no comparison with that from the spasmodic ; nevertheless, the results of the latter support the statements I recently published of the mortality in the Madras army for five years, from which it appeared that the mortality from cholera, even in the worst periods, never reached two per cent. of the whole mortality of the army. Inflammatory diseases, whether of the head (370), chest (1,574), or bowels (326), bear a small proportion to the total diseases. I should have thought that inflammation of the chest would have stood prominent in the Upper Provinces ; but it appears only to have prevailed to any extent at Moradabad, while a greater number appear on the returns from Chittagong, and 248 from Moorshedabad. Diseases of the nervous functions appear scarcely marked. The largest figure is 1,170, paralysis, with only 90 apoplexy, and 68 tetanus, mania 369, many of which cases are returned cured. It is a singular feature among the people of India that so small an amount of madness, in its various forms, prevails.

Dropsy, under its different divisions, is by no means uncommon, but its treatment on the whole appears successful. Leprosy appears to a considerable extent, 2,436 cases, and throughout the Upper and Lower Provinces remedial treatment appears generally ineffectual, but some cases to the contrary, in one or two of the returns, have led to one of my preliminary observations. I may say the same of asthma, which is generally returned as relieved only, but in some cases the contrary. The asthmatic cases are 3,740. Consumption does not appear on the returns at all of six Dispensaries ; a solitary case on some others, and the highest number is at Chittagong (44), where it might have been least expected. On the whole, it is comparatively non-existent in India. Colds are common enough (6,466), although not a third of the fever cases, and do not appear to produce the consequences common in less favoured climates. Disease of the liver, both acute and chronic, the bane of Europeans in India, is but a fraction of the whole amount of disease amongst the natives, only 299 acute, and 739 chronic cases, having come under the observation of the sub-assistant surgeons. It might have been supposed that columns for fifty-eight diseases would have comprised all that it was necessary to report ; nevertheless, so far from this being the case, the column of *Alii Morbi* contains the greatest total of any, namely, 51,908. This column comprises hæmorrhoids, cancer, fistula in ano, exostosis, amaurosis, catalepsia, bronchitis, constipation, diseases of the teeth, croup, hysteria, hydrophobia, leucorrhœa, diabetes, and unusual forms of diseases of the respiratory organs, of the sexual organs, of the skin, &c., &c. On the subject of the mortality in the treatment of the different diseases, I shall say little ; it can only be fairly put in connexion with the treatment of the house-patients. Here the diseases mostly ran their course and the results were satisfactorily known, but even from the house-list, patients to the number of 1,550 absconded before they were healed. Amongst the out-patients, the results of 89,263 cases were not known, by the parties not returning to the Dispensary ; of these many may have died, who are not inserted in the returns. As the Dispensary returns, however, show the number of those who did not return, and the diseases for which they were treated, an approximate estimate of

the probable results may be obtained from the nature of the diseases, and using the results of the treatment of similar diseases in the house-list as elements of comparison and deduction. 171,722 of the out-patients were known to be cured, and the known success justifies, to a certain extent, qualified presumptions of success in the unknown cases. I must, however, refer those disposed to investigate the subject to the tables themselves for the details.

Most of the tables contain a very useful entry of the average time the several diseases were under treatment, both those which ended in death and those which were cured. It is to be regretted that this entry is occasionally omitted in some Dispensary returns, which have once made it, but in others it has never been entered at all, although there is a column for it in the prescribed forms. It would appear that the average results of the time under treatment differs, not only in the returns of the different Dispensaries, but in the returns of the same Dispensary, contrasting one half-year with another half-year. I looked to see whether the difference resulted from climate, distinguishing the Lower from the Upper Provinces, or between one season and another in the same Dispensary, but I could not come to any satisfactory conclusions. A table of the average time some of the principal diseases were under treatment is annexed.

I have now laid before the Section in half an hour, results which it has cost me from eight to ten hours daily labour for three weeks, to accumulate, compare, and digest, and I shall now proceed to easier matters.

I have hitherto adverted only to the knowledge of medicine of the sub-assistant surgeons, but the most valuable branch of knowledge taught to these young men is the science of surgery. The amputation of limbs, couching for cataract, cutting for stone, tapping for dropsy, &c. The success of the several operations is very creditable to the skill and to the nerve of the operators. The diary of many of these cases by some of the operators, in their own simple, and for the sake of brevity, contracted language, is often of considerable interest. I annex two notices of cases of lithotomy, as types of others; but Sub-Assistant Surgeon Ram Narrain Doss, of Cawnpoor, showed his skill, not only as a manipulator in lithotomy, but as an excellent draftsman, for he attached to his report drawings of the stones he extracted.

“Cawnpoor, Dec. 1843.

“Among the operations performed lithotomy forms the most in the number, and since the Dispensary is under my charge, I have operated for stone on twelve subjects, and am proud to say that I have been successful in all of them, all got well without much trouble or suffering, and within the past six months, four cases of lithotomy have been operated, and three are discharged cured, and one is under treatment\*.”

“Jabbulpoor, Dec. 1845.

“In this case there was evidently infiltration of urine in the cellular tissue about the neck of the bladder and the communication between that receptacle and rectum was the result of ulceration. The rectum was not certainly wounded during the operation. This is the

\* Ram Narrain Doss.—His own words.



only case in which untoward symptoms came on out of my ten successful operations\*.”

It will not be necessary to advert more at large to numerous successful surgical operations of all kinds performed by these young men, but in the Appendix I have collected some lists of reported cases for the inspection of such as desire to examine them.

Another of the important duties these young men had to perform, was the discovery and application to remedial purposes of native medicines, many of which were known to be very efficacious, although unknown to our pharmacopœias. It was desired to save the expenditure of European medicines, and to select such native medicines as might advantageously be incorporated in our English pharmacy. How effectually this desire has been realized, will be shown by the accompanying selections from the lists of new medicines used in the Dispensaries†. The most extended list is that supplied by Dr. Davis, of Patna, the zealous author of the statistical account of that city. He has given the names in Hindee and Persian, and has shown where a corresponding English name is wanting, and a glance down his columns proves that 232 native medicines are unknown to our English pharmacy, and the native sub-assistant surgeons supply others. The latter, in their reports upon the compound metallic native medicines, show a very respectable knowledge of chemical analysis; for they themselves, when dissatisfied with the accounts of native physicians, of their process of preparing their medicines, test their accuracy by analysis. In one instance Ram Narrain Doss, of Cawnpoor, exhibits not only his botanical knowledge, but his power of delineation, by sending a scientific description and correct drawing of a plant producing a new medicine, the sha-pussund, a convolvulus, the seeds of which have the same purgative property as rhubarb. He gives an analysis also of the seeds. The drawing accompanies this paper. Dr. Balfour, of Agra, reporting on the conduct of Omachurn Set, on the 31st January, 1841, says—

“All the above, marked as quotation, is from the information of the sub-assistant surgeon, and is furnished generally in his own words. I am happy to be able to continue to report favourably both on his attention and the success of his practice, as it has fallen under my observation. He has, as will be seen above, introduced a considerable number of native remedies into the Dispensary practice, the most useful of which undoubtedly are the blistering flies, and the turbuth, which is now used in large quantities as a substitute for jalap, and will greatly reduce the expenditure of that drug. The most perfect confidence appears to be placed in the sub-assistant surgeon by his patients—they come from very great distances, and are many of them of a most respectable class—and it is no uncommon thing to see one who has been cured return, bringing with him a sick comrade or relation to introduce him to the place. They also return when afflicted themselves with different ailments or a return of the former one. With all the success of the Dispensary, there has been no driving or urging of patients to attend; all that has been done has been to extend the knowledge of

\* Sarva Churn Dutt.—His own words.

† It is found inconvenient to insert these lists in the Journal of the Statistical Society; but they are preserved in the archives of the Society for inspection.

the institution as widely as possible, leaving the people to come unfettered. This has answered well, and means are at present being taken by hand-bills in the native languages (which are getting ready) to spread as widely as possible in the neighbouring districts, the intention and benefits of the Agra Dispensary.

(Signed) JOHN BALFOUR,  
*“Officiating Civil Surgeon and Officiating Secretary,  
 “Dispensary Committee.”*

An inspection of the general analysis of the house and out-patients will show that there are only three cases of small-pox, and none at all of scurvy, received into the house; and amongst the out-patients only 147 cases of small-pox, and 201 of scurvy. The inference from this inspection would naturally be, that neither the one disease nor the other had scarcely any existence in India. In the one case the inference would be right, in the other, utterly wrong; small-pox being one of the scourges of India. An explanation of this paradox is afforded by the reports. I have previously stated that the reports, independently of rigid statistics, supply information regarding the superstitions, the prejudices, the customs and manners of the natives. The small-pox paradox resolves itself into a universal superstition of the people; and I proceed to solve it by reading extracts partly from the reports of the civil surgeons, and partly from those of the native sub-assistant surgeons. I will not here distinguish the one from the other, leaving it to the Section to determine from the phraseology which is the European and which the Native report; and, first, with regard to the *intensity* of small-pox.

“Patna, December, 1843.

“Small-pox raged epidemically as late as the early part of the last month, and we still have under treatment several who are suffering from the sequelæ; these are chiefly abscesses, ulcers, swelling of the joints, &c. If the present year be said to be more fortunate to the grown-up people, it has, nevertheless, been very inauspicious to children. If I say 2,000 of these little beings have sunk under small-pox, I do by no means exaggerate the number\*.”

We now come to the explanation of the non-appearance of small-pox cases in the returns, which leads at once to the painful subject of existing popular superstitions.

“Allahabad, December, 1843.

“Nothing causes a greater havoc among children than the small-pox—it carries away nearly half of those it affects. It is regarded as a mark of Divine visitation. The Natives are so afraid of it that they dare not administer any medicine, nay, not even to mitigate the severity of the attack, lest the presiding goddess *Setula* take offence for thus attempting to thwart the course she has appointed, and wreak her vengeance on the other children of the mother. This groundless fear has been so strongly impressed on the mind of the ignorant mother, that in many cases she does not indulge her maternal feelings by weeping over the corpse of her dear lost babe; but what cannot prejudice

\* By Issar Chunder Gungobee, in his own words.



effect? During the months of March, April, and May no medicine is administered to such fever cases as had not the small-pox before previous to the four or five days; but as soon as the pimples make their appearance they are confined in a room where no air can play, and whence not a bit of the patient's dirty clothes is permitted to be removed before perfect health is restored, or death ensues. It is no wonder, then, if, under so many unfavourable circumstances, a large number of children were to die of this plague. But the train of miseries does not terminate here. Many of those who survive suffer from abscesses of the joints, blindness, deafness, scrofula, bowel complaints, &c., &c., &c.

"The people of Allahabad know not what inoculation is, nor have they any faith in vaccination. However, I doubt not that in the course of a couple of years their eyes will be open to the vast importance of the latter\*."

"Jubbulpoor, September 1, 1842.

"The next disease, small-pox, raged simultaneously with the former. It was in a large number of instances extremely severe in its character, and occasioned some mortality throughout the whole district. The difficulty with which a case of small-pox may be brought to the Dispensary, and the general prevalence of superstition, debarred many to participate in time the advantages which this institution affords, the benefits of which they are so fully aware, looking upon it with grateful feelings as one of the numerous blessings from an enlightened Government. I need not state, that it is an universal belief throughout the whole country that small-pox and measles are of supernatural origin, and that all medical interferences during its course are highly iniquitous, as they bring down the wrath of the goddess from whose hands the scourge descends. Hence it was that a very small number of applications were received during the course of the disease†."

"September 1, 1842.

"SIR,—I have the honour to inform you, that in my last half-yearly return, ending on the 31st July, 1842, the most prevailing diseases in that season were the small-pox, intermittent fever, continued fever, rheumatism, and partial paralysis. The small-pox, though it was in its contagious state in the city at that time, but very few children affected with the disease were brought to the Dispensary, because the inhabitants of every caste here, on account of prejudices and superstition, chiefly the Hindoos, never subject their children to any medical treatment whatever, from fear that the 'Mauta,' or 'Sillah,' or the goddess of small-pox, will be incensed with them; they even never bring their children out of the house, nor give admission to their intimate friends into their houses, lest the shadow of the man produce any harm to the child; consequently they leave their children to the mercy of their goddess, and allow an ignorant and low caste of people called 'Bhauguts' to interfere for them, who pretend to be as devotees of the goddess. These people do not give any kind of medicine, but vow some previous sacrifices which they make of different kinds, if the

\* Jandub Chunder Dhara.—His own words.

† Dr. Ronald, Civil Surgeon.

small-pox be in its confluent state; and very few when distinct; and this is the reason that you will find no more than eight patients were brought to the Dispensary, and were accordingly inserted in my last half-yearly return. The intermittent fever always prevails in the hot season here\*."

It is hence shown that small-pox, although scarcely noticed in the returns, is one of the most fatal maladies of the country; and this mortality is unhappily enhanced by the superstitions of the people.

While on the subject of superstition, I may as well add two or three other extracts, patent to our subject, which show the difficulties the European has to experience in working out his benevolent intentions; and, first, with respect to caste.

" Bhowaneeepoor, January 31, 1845.

" I therefore most respectfully beg to draw the favourable attention of yourself, the Superintending Surgeon, and ultimately of the Medical Board, to my following suggestions for extending the benefit of this establishment, by removing the serious impediment that stands in the way of its active and extensive operation. I have already stated in my last report that the rooms assigned for the reception of house-patients are very small, and void of free ventilation, so essentially necessary for the purpose. There are three rooms altogether, in two of which four beds are placed, and in the smallest one only one bed. The room for the distribution of medicine, and the space for seats of out-patients, are also so small, that if even one-third of the average daily applicants enter the Dispensary at once, half of them are obliged to stand. This is the only reason why the respectable people hesitate to come in the Dispensary for medicine, where they very justly apprehend the disagreeable necessity of either standing up till they are called, or to sit down with persons *whose touch, nay, even proximity, is not only calculated to cause a disgrace, but to impose upon them the necessity of washing their body after such a contact has taken place, even if it be so by chance.*

" This notion, however superstitious, hinders many a respectable man from availing himself of the advantage of the Dispensary treatment, the superiority of which above the common quackery is unhesitatingly appreciated by them. Under the inconveniences already enumerated as regards the smallness and the limited number of the rooms, I beg leave to state, that no distinction can be made between the male and female, the Hindoo and the Mahomedan patients; more especially as the rooms are connected with each other by openings, and the one is a thoroughfare for the others. This is the only reason, I apprehend, why so small a number of patients like to be treated within the Dispensary†."

The Sub-Assistant Surgeon of the Allahabad Dispensary, writes:—

" The Hindoo villagers, who form the largest portion of our patients, both extern and intern, and who, when they come for treatment, generally bring their families with them, objected to live in the hospital bungalow, as much through the fear of losing their caste, as of being

\* Chimmun Loll.—His own words, in a letter to A. Ross, Esq., Civil Surgeon, Delhi.

† Callachund Day.—His own words.



obliged to be separated from their dear ones. To obviate this difficulty, the late magistrate, Mr. R. Montgomerie, had raised a large hut, divided into seven rooms; one of these has been made the hospital cook-room, and the other six allotted to the village patients, where they lived with their families and friends very comfortably. These huts were regularly repaired by the magistrate's men, but since the departure of that functionary, they have been entirely neglected, and the late rains have brought them down to the ground. This has put a stop to the influx of many important surgical and medical cases, as well as greatly interfered with the cook's duties, and the preparation of decoctions, infusions, ointment, &c. &c. I had repeatedly brought this fact to the notice of the present magistrate, the Dispensary committee, and latterly to that of the civil engineer, but I am sorry to say with no good results. They have all acknowledged the great utility of these out-houses, yet have refused to repair them, the magistrate because he has no funds for the purpose, and the civil engineer because it is not his duty. This has been a serious loss, and I fear the Dispensary will have to suffer on its account. It having already sustained a loss of 58 patients, last time there were 152, whereas there were 92 only this season.

"The people of Upper Hindoostan are still so strongly prejudiced against female freedom and female happiness, that they always take the best care to keep their wives and daughters in the innermost recess of their cooped-up houses; they have no faith on each other, and consequently none of the other sex, but such as belong to the family, can have an access to the family part. When sick of the ordinary diseases, I mean when not very dangerously ill, they must be treated by the history of the case as described by some of their male relatives, otherwise the physician is permitted to feel the pulse, by which guide alone they must be treated. It is no wonder then that for the diseases of the urinary and the generative organs they should invariably have recourse to nurses and old grandmothers. The very few who apply to the Dispensary come not before the disease has advanced to a fatal extent. A very large number of women suffer on account of this over modesty and groundless shame from difficult parturition and its sequelæ. The country nurses, who are proverbially ignorant, and who know nothing of the organs they deal with, or of their functions, natural or as modified by circumstances, but are nurses only by birth-right, are called in on all occasions of parturition; but these, instead of assisting the parturient female, treat her so roughly, and that so frequently, and relate to her so many frightful tales, to shorten as they believe labour pains, and to quicken delivery, as to depress her spirits entirely. Thus a most easy and natural phenomenon is often converted into a most troublesome and hazardous job. The Hakeems have no medicines to expedite delivery, neither do the people approve of the plan of administering medicines to pregnant women.

"The next source of female misery lies in the belief in ghosts and evil spirits. The nervous diseases are all regarded as signs of the patient being influenced by *bhoot* or ghosts, recourse is therefore invariably had in all such cases to blowing *munters*\*, and suspending amulets.

\* Charms.

“*Mithooa*, so called from a false notion that the disease arises from the excessive sweetness, or *mithæ*, of the mother’s milk. It is a very fatal disease. It greatly resembles the *tabes mesenterica* of the European authors, I say resembles, because I have not yet had an opportunity to identify the two diseases by *post mortem* examination. *Mithooa* is characterized by the same wasting of the body, tumefaction of the abdomen, presence of a slow fever, disordered state of the bowels, and, lastly, consumption and death. A combination of two savage customs has contributed to make this disease so common in this country, and the extreme poverty of the people has made it so fatal, at or about the second month of its infantile life, every child is made to take opium, wine, or any other narcotic drug to lull it into sleep—this unnatural and cruel practice has gained so firm a footing, in this city in particular, that even the rich mothers, who can easily afford maid servants for their children, nay, who have them already, indulge in it frequently. I have repeatedly explained the evil consequences of such a dangerous proceeding, and so has Dr. Beattie (who was ever anxious and always ready to promote the interest of the Dispensary, and to convince the people of the superiority of the Dispensary mode of treatment over the native quackery,) often done to give validity to my assertions, but I fear with no very good or great results. The ample opportunity afforded to the mother by this inhuman course, and the very few number of times she is required to suckle the child, induce her soon to overlook the evil and dangerous consequences, and to resume her task of destruction\*.”

“Mooradabad, January 31, 1845.

“Although the people as elsewhere well know the benefits they often derive from the Institution, from the circumstance of numerous difficult and hopeless cases being cured daily; yet why they do not resort to it at the commencement of their sickness is a matter much to be wondered at. They seem to entertain a deadly fear of the knife. Another circumstance to be noticed, is that the female sex, when they become attacked with a fatal or trifling disease, are never allowed to appear before a physician. Whenever I am called upon to attend them, the pulse is the only guide by which to ascertain the extent of their disease. The people, whenever they are attacked with any disease, often bring with them their urine for my inspection. The inspection of urine being considered as a safe and certain guide to ascertain the nature and extent of every disease†.”

It will thus be seen that there is no ordinary difficulty in administering to female ailments, from the determined exclusion of the women of many classes: and caste, and superstitious usages add to the difficulties the European medical man has to encounter.

I now submit extracts from various reports; one from the Statistical Report of Dr. Davis upon Patna; one relating to meteorology; another containing sensible observations on burial-grounds at Benares; another on strokes of the sun; an entire but short report from a European civil surgeon, for comparison with native reports; one upon drainage; and finally, an extract, illustrative of grammatical phraseology.

\* Sub-Assistant-Surgeon Jandub Chunder Dhara.

† Tara Chand Pine.



Respecting the inhabitants of Patna, Dr. S. Davis writes:—

“The habits, education, morals, and customs of the inhabitants of the city are in many respects better than those of many of the great cities of India. There is less of religious parade and intolerance amongst the Hindoos; and the Mussulmans (though very numerous) are greatly shorn of that arrogance which has clung to their character and manners, more or less since the Mahomedan conquests: this doubtless arises from the circumstance of there being but few families of either nobility or large property, and consequently few priests to minister to their vanities and weaknesses, for ‘wherever the carcass is, there the ravens will be.’

“I have before said that the city impresses the enquirer with the idea of active industry, and it is chiefly by the exercise of this that the large population is supported. As regards education all that can be said is, that as a certain quantity of learning is necessary for bunyas and shopkeepers, there are few, except the poorest of the labouring classes, who cannot read and write, and but few who have higher acquirements of a scholastic character than this, if we except a class of men who are brought up with a view of exercising their talents as Omlahs in the different Courts, and a few others who are in the course of education at the Government School. Amongst the former are some learned in oriental literature, but by far the greater part are Utilitarians, and acquire only that measure, which will come into actual play, and turn to account. The Government School having been established but five years, it is difficult to say what will eventually be the effect of it; but when we consider that the great inducements to learning are profit, either in the shape of money, station, or fame, and the little chance the *élèves* of these establishments have with those who have been spending their youth in acquiring an intimate acquaintance with the actual practice of the Courts, and are, as it were, ready-made Omlahs, I think the chances are, that those who merely look on the profit side of the question will give their sons an education, which will fit them for immediate employment at Patna. The Government School has never been a popular institution. At first there was a feeling that it was intended to alienate the children from their paternal faith; then again, the system was not considered sufficiently utilitarian, so that comparatively but few of the respectable natives encouraged their children to attend it. Time will doubtless wear away their feelings, and we may yet hope to see knowledge spread its root and branches far and wide.

“With respect to the morals and customs of the citizens, it is difficult to form any rational conclusion, on account of the exclusive mode of life of both Hindoos and Mussulmans, except that inasmuch as industry prevails, immorality (which is the offspring of idleness) usually declines. In a population of upwards of three lacs there must be much immorality, and in crowded cities drunkenness is generally a crying evil. It is to be lamented that there are many facilities for indulging this vice: the city is surrounded with toddy trees; and in addition to the produce of these, intoxicating liquors are prepared from molasses, *mowa*, and other articles; but notwithstanding this, I do not think that the inhabitants generally are intemperate, though in a city of such magnitude, the consumption of country wine and spirit

among the lower classes must be considerable. The grosser vices of bloodshed and theft appear to be less frequent than in other districts, owing probably to the full employment which every one willing to work may obtain for his time; and on the whole the population may be classed as industrious, with fewer of the prejudices than exist among the village population generally. There is nothing peculiar to notice in their customs, and I shall proceed to a slight review of the state of the public health.

“The province of Behar may be considered as favourable to health as most parts of the Continent of India, and the diseases I have mentioned as frequently met with at Patna cannot be considered as proof to the contrary. The objects of some of them are outcasts from their families and homes, and are brought together here from the surrounding districts, by the common desire of exciting the commiseration of the wealthy and humane.

“As in all crowded cities epidemics occasionally appear, and spread devastation around them; and during the eight years of my residence I have seen several severe visitations of cholera and remittent fever, the former usually making its appearance at the commencement of the hot winds. There is often in April and May, an indescribable but well understood state of the atmosphere, accompanied with variations in the wind, and a hazy and sultry appearance that is favourable to the production of the former very frightful disease. During such weather you find vegetation blighted by impalpably small animalculæ, which elude the perception of the naked eye, but are easily discerned by the aid of microscopic instruments.

“I have long thought that cholera and some other diseases have their origin in animalculine blight, and late writers have brought together so many facts bearing on the subject, that this opinion gains ground with me daily, nor is the circumstance of diseases spreading more in crowded cities than in smaller localities at all contrary to this theory, since there are so many more points of attraction or deposit. The state of the atmosphere is without doubt greatly modified by the locality over which it ranges, and in situations favourable to the production of disease, it is not unreasonable to conclude that a peculiar state of it is attended by a vivifying influence which brings into existence poisonous animalculine exhalations capable of producing maladies in those who may be obnoxious to it, either from congenital or induced debility or other idiosyncrasy. Those visitations are not of very frequent occurrence here, but the district to the south of Patna is rather low and swampy, and I think *cæteris paribus* rather favourable to the production of this pestilence. The same theory may perhaps be applicable to remittent fever, and the difference between the diseases accounted for, either by the quality or dose of the poison. The fevers of this part of the country are, however, much more manageable than the bilious remittent of Bengal, and partake more of the nature of inflammatory fever, as the remissions are very imperfect, and the Hepatic system is less deranged. Nineteen cases out of twenty yield to active and prompt medical treatment; but where this is neglected dysentery frequently ensues, and brings about a fatal termination. Rheumatism is very common, and difficult of cure, and a very great



many cases of cataract occur in men and women between the ages of 50 and 70: the operations for this disease at the City Dispensary are very numerous and successful.

“On a general review of the state of the population of Patna, as respects health and disease, I have little to suggest. It would be very desirable if the inhabitants were spread over a larger surface, but as this is almost impossible to accomplish, the greatest safeguard to health will be proper drainage, and the prevention of accumulations of filth. I have mentioned that the land to the southward of the city is in many parts very low, but although low, most of it is above the level of the river during the months of October and November, and might, without any great difficulty, be drained into it by one or two judiciously placed canals; this would probably interfere with the proprietary rights of a few zemindars, as the water is dammed for the purpose of irrigation; but this might be settled without much difficulty. If this plan were carried into effect, it would be necessary to have water on the side of the river to prevent its ingress during the rains, and in addition to these a pukka drain on either side of the main street communicating with these canals should be made, by which means the whole city and suburbs would be effectually drained. I cannot help thinking that this would materially add to the healthiness of the city, as I consider the fevers at the close of the rains to arise from pestilential exhalations from the low marshy land to the south, brought into a state of activity (if not of vitality) by a peculiar electrical state of the atmosphere, which occasionally prevails at that season; for it is a well-known fact that the residents of the high banks of the river suffer less than those of its southern environs. In respect to the many loathsome objects who are continually wandering about the streets of Patna, it is a great desideratum that some asylum should be provided for them, not with a view to their cure, for it is unlikely that more could be done for them in that respect than they have the means of attaining by application at the Dispensary, but in affording them food and shelter and a little clothing during the cold weather. It may be urged that these poor creatures are more the objects for private charity than for the consideration of Government; but when we see that, notwithstanding the liberal exercise of this, hundreds are outcasts from their family and homes, without food or clothes, and too much crippled by disease to obtain either by their own industry, it surely becomes a benign Government to find them shelter and protection. Even under the Native Governments, *Serais* were established and maintained, and endowments were given for charitable purposes; and it is difficult to contemplate their enlightened successors retrograding in charity and protection. The same state of things exists, I presume, in all the great cities of India, and a small appropriation of the many funds at the disposal of Government would put an end to it and prevent the unsightly perambulations of these pitiable but disgusting beings. The Ferry Funds are rich and unappropriated, and a ‘Refuge for the Destitute’ might be formed from them, which, under proper management, would be a real charity.”

The half-yearly report of Sub-Assistant-Surgeon Jaudub Chunder Dhara, after giving a succinct chronicle of the state of the atmosphere

and of disease, together with the operations of the Allahabad Dispensary during that period, terminates with the following observations by Jaudub Chunder Dhara, Sub-Assistant Surgeon.

“In conclusion, I beg to bring to the notice of the Board the happy and wonderful effects of the nitrate of silver, in a species of skin disease very common in India. It is characterised by the discoloration of the skin, in small patches, with loss of sensibility in the parts. The lips, palms of the hands, and soles of the feet are most frequently attacked, but the rest of the body is not entirely free from the affection. It begins in very minute white spots, which gradually expand till they occupy a larger surface. The disease is not attended with any pain or constitutional irritation; the patients enjoy pretty good health, and think of medicine, because the spots look bad, but especially because it is deemed by the natives the result of some first-rate sin committed in a former life.

“The Hakeems reckon seven different species, but I have remarked only two; one proceeds rapidly, and puts out of colour nearly the whole cutaneous surface, but the other is mild, and scarcely becomes larger than a Company’s rupee. It is to this last species that my experiments have been confined.

“The immediate cause of the disease is, I believe, the want of fresh secretion of the *rete mucosum*, consequent on debility of the secreting organs. The Hakeems have no cure for it, and I believe the disease is not known in Europe.

“The nitrate of silver removes these patches pretty quickly, and I think permanently too. It should be applied lightly to the spots from eight to twelve times, with an interval of five days between every two applications, to let the stain of the first wear off, before the second application is made. When the patches are first touched with the nitrate of silver there is, generally speaking, no pain felt, but after they have become redder and smaller there is a slight tingling sensation perceived.

“The healing commences from the circumference, and proceeds towards the centre. It is quick at first, but becomes more and more dull as the spots are reduced nearer to their original size.”

The Superintendent Surgeon adds:—

“In appending a few observations to this half-yearly report of Sub-Assistant-Surgeon Jaudub Chunder Dhara, I have much pleasure in stating, for the information of the Medical Board, that his conduct has been most exemplary during the last six months, and such as to merit my approval in every respect.

“From his excellent qualifications as a medical practitioner, zealous attention to his profession, and great success in his treatment of the numerous sick submitted to his care, he has inspired general confidence and respect.

“In the performance of surgical operations he exhibits coolness, dexterity, and judgment.

“The conduct of apprentice Lalla merits my approbation, and I intend shortly to send him before the Medical Committee at this station for examination as to the progress he has made in his studies. I regret to say that the other apprentice, ‘Chunnee,’ has not given satisfaction, and I have been obliged to dismiss him, and am looking



out for a substitute in his place; being a high caste Brahmin, he objected to touch a dead body."

The following notes on the burial-grounds of Benares, by Issar Chunder Gangooly, brings to light a most serious evil:—

"Benares, January 31, 1844.

"The liberal disposition with which suggestions are received by my superiors, emboldens me to bring to their notice the existence of another evil in Benares, which is productive of serious mischief, I mean the indiscriminate appropriation of grounds for burying the dead. I have counted 150, and some of my acquaintances say there is as many more, of these elevations of grounds, called takias, in and about Benares; and as the poor do not mind to bury the dead deeper than they think it necessary, a few years' rains expose them to the action of the atmospheric heat and air. The incalculable mischief which such an exposure might be productive of, can be known only to those who have witnessed the rapidity with which decomposition of animal matter takes place under an Indian sun of April and May. Were I to deal widely in hypothesis, I might with every plausible reason attribute the occurrence of epidemic cholera to this source. Effluvia from putrid dead bodies (emanating from the burial-grounds from accidental causes) under favourable circumstances, has been known even in Europe to nearly depopulate a number of villages, and that in India it will produce similar effects, but of an aggravated nature, is matter of no surprise."

A feature of Indian society not less deplorable, is that mentioned by Nilmoney Dutt, in explanation of the excessive mortality in the Pooree Dispensary:—

"This mortality, as occurring in a well-appointed public institution, is at first sight appalling; but when it is considered that the admissions are principally pilgrims to the shrine of Juggernaut, who are lifted from the road-side in a dying state, as was fully explained in the report of the last half-year, such a ratio of deaths so treated cannot occasion surprise, and is no wise attributable to mismanagement on the part of the Dispensary officers."

The Agra returns contain interesting notes by both the European and the Native officers; and the following observations on the use of Dispensaries, by Omachurn Set, are well worthy of perusal:—

August 9, 1842.

"I am glad to observe that the benefits of the Dispensary are now beginning to be better known and appreciated among the people than they were formerly. On reference, however, to the monthly returns, it would be found that the surgical diseases predominate vastly over the medical ones, a circumstance proving clearly the greater confidence they place in our treatment of the former than that of the latter classes of diseases, still it is not uncommon to find even the most respectable natives to have recourse to us for the treatment of medical complaints when the Hakeems failed in curing or affording the relief sought for. Those who have never used any European medicine seem to entertain a deadly dread of their strong action, and are not inclined

to take them, (though they might not have any objection on the score of religion,) if they could afford to buy from the Hakeem's shop the ordinary native medicines, which are said to be mild, and often perhaps *too mild* in their action, though usually grateful to the palate. The sick poor, however, seem to place an unbounded confidence in our treatment of both medical and surgical diseases. This is to be attributed partly to their being unable to purchase the native medicines from the Hakeems, partly to their being much less influenced by religious prejudices, which exercise so powerful a tone of authority over the thoughts and actions of the higher classes; but I believe, in a great measure, to the past experience they have had of the benefits of the European plan of treatment since the establishment of the Dispensary. The state of notoriety to which the Dispensary has already been brought into since its commencement would, it is to be hoped, work its way on the scruples and prejudices of many, which are still forming so formidable an obstacle to a more extensive distribution of medical relief."

Surgeon Shaw, at Agra, observes:—

"The season I consider to have been particularly healthy; there has been no epidemic—measles prevailed to some extent, but was of a mild character and seldom proved fatal. At one time small-pox was said to be in the city, but did not extend towards the middle and end of the hot winds; intermittent and remittent fevers assumed rather a formidable aspect, and carried many to their long homes. The additions to the list of applications for relief were not much increased by it. Those for local and surgical diseases were much more extensive than for medical, although there was a very fair show of the latter. The advantages derived from surgery are much easier demonstrated than those from medicine, and come more readily within the scope of a native's comprehension."

With reference to the obstacles to their acceptance of relief presented by the habits and customs of the natives, he adds:—

"Besides, a native is by no means given to follow the *post hoc ergo propter hoc* belief as far as regards cure by European medicine, however he might be induced to follow it after the charms and incantation of the Hakeem. There is, however, another reason which influences them. A native when ill has a great disinclination to be removed from his house. He cannot cook his own food, or wait upon himself. His caste acts as a bar to his being waited on by strangers, and therefore if he moves must necessarily bring along with him one or more of his relations; this of course is a serious evil to his household, and he prefers lingering on in his disease to seeking a cure at a distance. To this may be added the prejudices which already exist in his mind in favour of his native remedies. In most surgical diseases these objections do not exist. It is principally the poorer class of natives that flock to this charity for relief, and to them it is more satisfactory to afford it. They seek it with avidity, and receive the benefits with sincere thankfulness. It is, however, not infrequent for the better classes to apply, especially when their own remedies have failed."



*Drainage.—Calcutta.*

“*Roads, Streets, and Drains.*—While attempting to trace up by the increased prevalence of particular diseases in certain localities, to the nuisances therein located, with a view for their ultimate removal, we should not overlook a subject that is intimately connected with the health and comfort of the inhabitants of the suburbs in general, and perhaps of the city itself. I allude here to the bad state of the roads, streets, and drains throughout the suburbs, but more especially of those that are in the same lines with the prevalent winds. There can be no doubt that these at present exercise a considerable influence on the public health of the suburbs, and that an improvement on the former will be followed by a better enjoyment of the latter. But it is too well known to be here adverted to, that our mofussil roads and streets are very badly off, both as to their construction and cleanliness; and the drains here, instead of serving the purposes for which they were constructed, serve chiefly as reservoirs for filth and water, and thus generate those unseen particles termed *malaria*. These, with the dust from the roads, are carried off in the atmosphere, and conveyed through it by the prevalent winds northwards during one half year to the city, and southward to the district during the other, and thus become the fertile sources of disease in both. Hence the importance of paying more attention to the subject, cannot be too strongly urged to the notice of those that have the public management of them\*.”

*Food of the Natives.*

“Gyah, Feb. 1, 1845.

“The number of deaths that we had this year from diarrhoea is accounted for by the people of this country living chiefly on *Sattoo*, parched gram, a coarse kind of flour and other indigestible vegetable food, which by continued use excite a kind of chronic irritation in the stomach and intestines, producing symptoms of dyspepsia and diarrhoea, which the poor people neglect till they are unable to go on without medical assistance, then they come to the hospital with the disease too far advanced, and with oedema of their extremities, and at that time medicines can do very little for them.

“SHAMACHURN SIRCAR,

“*Sub-Assistant Surgeon.*”

“Patna.

“The prevailing complaints were fevers, spleen, diarrhoea, dysentery, &c. The Native Medical Officer observes, that ‘bowel complaints in this district of the country depend more upon the irregularity of food which they (the people) live upon, and the water they drink, than upon climate.’ Cholera, he reports, had raged in the city with violence during the months of May, June, and July last. The surgical operations performed by him have been numerous.

“RAM ESHUR AWASTHEE.”

This series of extracts shows that the young men did not confine themselves to the mere mechanical performance of their professional duties, but that they took comprehensive views of the means of making

\* Observations on Drainage, by Callachund Day.

their own knowledge more generally useful, and they have advanced their reputation and the good of the State by so doing.

There are returns of vaccination and cholera, treated in the cities and districts, but as they do not come under strict Dispensary practice, I abstain from noticing them.

Lucknow Hospital.

The King of Lucknow, in imitation of the liberality of the Company's Government, established in Oude a charitable hospital for the sick; but of this it is unnecessary to speak.

Calcutta Hospital.

The Calcutta Hospital is entirely independent of the Dispensaries previously noticed, and with its dependant Dispensaries, relieves annually an amazing amount of suffering. The return is—

Relieved.		Funds.	
1842.	1843.	1842.	1843.
294,885	307,112	403,338 Rs.	419,838 Rs.

With one or two words on the estimation of the character and abilities of these sub-assistant surgeons by their superiors, as typical of their general estimation, I close my notices of Bengal.

Mr. Macintire says of Shamachurn Dutt:—

“ January 31, 1845.

“To the foregoing Report I have only to add, that the general and professional conduct of Sub-Assistant Surgeon Shamachurn Dutt, continues such as to merit the highest commendation which it is in my power to bestow. He is respected not only by such Europeans as know him, but by all classes of his countrymen in and about Jubbulpore, whose confidence in him as a medical practitioner is increasing in a very pleasing manner, considering their ignorance, superstitions, and deeply-rooted prejudices. In fact, the institution under his professional charge has turned out to be a real blessing to the native population of this part of the country.

“(Signed) J. MACINTIRE,  
“ Civil-Assistant-Surgeon,  
“ and Superintendent of Government Dispensary, Jubbulpore.”

And Dr. Cumberland could shew his confidence no further than by putting himself into the hands of Nilmoney Dutt, to be killed or cured, as he relates in the half-yearly Report of the Government Dispensary at Pooree, February to July, 1841, from which the following are extracts:—

“A scarcity of grain has prevailed for many months past, and the same still continues, although the disease has ceased.

“There can be no doubt, however, that the scarcity has been the chief cause of the excessive mortality attending the disease. The grain that the poorer class of people consume, is of a very coarse and inferior quality, and they eked out a scanty meal of this, with such indigestible herbs and roots, that they do not eat at other times. the irritable state of the intestinal canal thus induced, rendered them pecu-



liarily liable to an attack of cholera, while the debility attendant on long-continued poor diet rendered them ill able to bear up against the disease.

“Sub-Assistant Surgeon Baboo Nilmoney Dutt joined on the 17th May last. His conduct has been very good in every respect. With regard to his qualifications, I cannot say more than that I entrusted myself with confidence to his care, when labouring under an attack of bilious remittent fever, and have every reason to be satisfied with his prompt and judicious treatment. The conduct of the two apprentices still continues to merit my warmest approval. They have lately had many trying scenes to encounter, particularly when there were 140 patients in hospital at once, most of them suffering from cholera. These youths were constantly in attendance, both night and day, for weeks together.

“Pooree, August 1, 1841.”

“R. B. CUMBERLAND.

Of Madras and Bombay I shall say little, for there is little to say.

The following, however, shows that Dispensaries were authorized for Madras, but I know nothing of their working or usefulness. It is an extract from a Public Letter to Fort St. George:—

“December 8, 1841.

“We sanction the formation of Dispensaries in the towns of Trichinopoly, Madura, Masulipatam, Nellore, Bellary, and Cuddapa, as an experimental measure, in the manner proposed; but we desire that no others may be established, until we are informed of the expense, and are satisfied with the results of those now sanctioned.

“On the establishment of these Hospitals, ample opportunity of instruction should be afforded to such Native students of medicine as may be in a condition to avail themselves of such an advantage.”

#### *Dispensaries subsequently authorized.*

One on the south side of Madras, for the benefit of the poorer classes of the inhabitants of Triplicane, Royapettah, St. Thome, and the adjoining villages; also at Salem, Calicut, Vizagapatam, and Kurnaul.

In Bombay the Dispensaries are under the European medical officer, and not, as in Bengal, under a sub-assistant surgeon. The Bombay system is adopted at Madras, The judge and magistrate to allot a public building, or to hire one. *Not indiscriminately* open to every patient. The Native inhabitants with the ordinary diseases not to be admitted as *in-patients*, but accessible for advice and medicine to all *out-patients*. European superintendent to have fifty rupees per mensem. Each Dispensary to have ten barrack-cots, matrasses, pillows, and twenty quilts. Each to have a second dresser or assistant. To be inspected by the magistrates and superintending surgeons. When females apply, a separate ward to be allotted to them.

There are not any returns from Bombay.

In conclusion: it has been contemptuously said, and is still said, that in case the Company's Government in India were swept away, not a monument of its existence would remain to attest its former state

and power. No doubt the Governments that have preceded the British in India have left sufficient proofs of their existence. The early Buddhist and Hindoo authorities have, indeed, left prodigious monuments of their wealth, of their power, of their perseverance, and of their religious enthusiasm, in their mighty cave temples and vast religious edifices. The Mahomedans, too, have studded the land with their magnificent mausolea, testifying rather to their pride than their piety. And what have the British done? I say we have raised greater and more lasting monuments than all these. One small extract from a report of a Native sub-assistant surgeon shall justify my assertion; he says.—

“Delhi, August 1, 1841.

“One boy, about twelve years of age, who had been blind from cataract in both eyes from the age of two years, was operated on by couching and restored to sight\*.”

I affirm that this faculty, given to a single native, to perform the God-like office of restoring the blind of his countrymen to sight, is a more glorious monument than all the works of art that human pride or human ambition have ever burthened the earth with; but when we find scores of such individuals endowed with such a faculty, and thousands, nay, tens of thousands, possibly the recipients of the blessings they can confer,—when we find the Medical Boards of the Bengal Government reporting to Government on the 22nd August, 1843,—

“We have every reason to believe that the benevolent intention of Government in founding these institutions has been fully realized—and we feel confident that future annual results will add to the intrinsic value of the Dispensaries, which are so well adapted by their internal economy to obtain the confidence of the native inhabitants.

“Many have had their sight restored—others have been cured of hydrocele—and relieved when in the last stage of dropsy. Several have also derived effectual relief from the successful operation for stone in the bladder. A few have been saved from a miserable death by the amputation of diseased members, and large tumours have been removed.

“Such operations could not have been achieved by native practitioners, without producing an impression on the minds of the most apathetic natives, and they must tend to spread far and wide the value of the Government Dispensaries.”

Then, I say, and with a thorough conviction of the truth of my assertion, in case the seeds of knowledge we have thus sown fructify to a general and luxuriant harvest, that we shall have left a monument with which those of Ashoka, Chundra Goopta, and Shah Jehan, or any other Indian potentate sink into insignificance; and their names shall fall on men's ears unheeded, while those of Auckland, as projector, and of Goodeve, and Mouatt, and others, as zealous promoters of scientific Native medical education, shall remain embalmed in the memory of a grateful Indian posterity.

\* Sub-Assistant Surgeon Chimmun Zall.



TABLE I.—Showing the Admissions and Deaths among the Out-Patients treated in the Charitable Dispensaries of Bengal and the North-Western Provinces.

Number of Half-yearly Reports.		Of the Digestive Function.					Of the Respiratory Function	Of the Sanguineous Function.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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								Colica.	Diarrhoea.	Biliosa.	Spasmodica.	Icterus.	Asthma.	Intermittens.	Remittens.	Continua.	Phlegmon and Abscesses.	Cephalica.	Thoracica.	Enteritica.	Hepatitis.	Splenitis.	Ophthalmia.	Catarrhus.	Dysentery.	Rheumatism.	Varicella.	Phtisis Pulmonalis.	Scrofula.	Syphilis.	Elephantiasis.	Scorbutus.	Gangrena.	Ulcers.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Cholera.						Febris.		Phlegmon and Abscesses.		Inflammatio.			Hepatitis.		Splenitis.		Ophthalmia.		Catarrhus.		Dysentery.		Rheumatism.		Varicella.		Phtisis Pulmonalis.		Scrofula.		Syphilis.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
4	Bhowanipoor .....	327	217	8	28	19	61	523	79	435	1253	20	14	24	5	32	291	94	220	172	111	130	137	1573	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE I.—continued.

Number of Half-yearly Reports.	Of the Nervous Function.						Of the Sexual Function.		Of the Excrement Function.						From External Violence.						Total.	Died.	Cured.	Relieved or Absconded.	Expenses for the Half-year ending 31st Jan. 1845.						
	Mania.	Catarrh.	Tetanus.	Chorea.	Epilepsia.	Apoplexia.	Paralysis.	Gonorrhoea.	Tumours.		Hydrops.		Hydrocele.	Dysuria.	Lepra.	Psora and Herpes.	Contusio.	Luxatio & Subluxatio.	Vulnus.							Fractura.	Concussio Cerebri.	Alii Morbi			
									Bronchocele.	Tumores.	Anasarca.	Hydrothorax.							Ascites.												
4 Bhowanipoor ....	23	87	6	9	12	23	86	278	3	44	106	..	24	19	13	205	1001	230	47	185	8	2	16	21	..	2622	12838	11	8271	4556	1185
6 Moorsheadabad....	21	..	..	6	4	..	27	333	7	24	45	..	10	24	23	1289	20	147	88	..	..	..	20	8	..	2723	12731	16	6404	6311	1099
6 Pooree, Juggernath	23	7	..	1	4	..	2	63	..	9	148	..	7	8	1	24	238	17	9	36	..	..	..	20	..	471	4136	560	2236	1340	1969
5 Chittagong .....	20	54	..	..	74	12	87	576	30	54	45	..	4	54	16	164	1814	127	22	481	..	..	..	15	..	7478	17963	15	11468	6480	1021
6 Dacca .....	59	53	5	7	19	..	43	264	21	35	21	8	73	34	16	157	1233	64	41	94	..	..	..	11	36	4669	17805	207	13789	4309	1161
6 Patna .....	14	190	1	..	11	..	222	617	296	24	142	1	54	141	3	189	2420	171	6	39	15	..	49	6	3	5629	30134	124	22855	7155	1749
6 Benares .....	92	76	31	7	29	34	285	1496	94	463	233	7	185	723	401	320	2394	115	240	322	4	20	125	315	1	2113	36006	177	22638	1391	1865
6 Allahabad.....	26	149	10	13	34	4	74	656	8	45	141	..	75	65	61	312	2066	89	5	144	..	2	37	22	..	4704	23523	167	13824	9532	1770
2 Furruckabad ....	..	2	..	..	..	5	3	48	3	11	10	..	6	2	22	6	189	..	2	2	..	..	..	13	..	902	3061	1	1864	1196	1037
6 Cawnpoor .....	13	..	..	..	15	..	20	258	..	47	16	..	53	54	34	124	1022	245	14	110	..	..	..	..	..	2088	11061	..	10053	1008	1547
6 Agra .....	10	60	..	..	27	1	97	687	..	2	13	21	34	15	23	340	2220	7	66	95	..	2	7	25	1	4556	19052	..	..	19052	1542
2 Muttra .....	1	..	..	..	5	..	6	68	1	2	5	..	20	1	32	41	802	1	3	4	..	..	..	..	..	968	5120	4	4396	720	1385
6 Delhi .....	..	37	1	2	21	1	39	547	9	29	40	3	23	15	2	191	1015	124	37	108	..	..	16	..	2957	14662	1	12173	2488	1236	
6 Bareilly .....	5	8	6	1	10	1	70	388	58	28	42	..	40	6	239	106	4295	151	4	319	..	..	173	31	4	6038	31101	135	18102	12864	1393
5 Moradabad .....	10	13	..	13	6	..	30	147	9	19	8	..	16	22	51	57	1314	34	20	140	..	1	17	24	..	2219	9551	64	8828	659	1355
1 Shahjehanpoor ..	1	53	1	..	..	..	26	32	..	4	9	..	1	3	16	17	200	71	4	40	..	..	10	10	..	205	1775	3	1464	299	1023
4 Jubbulpoor .....	11	32	1	2	20	..	10	174	3	8	42	..	4	10	38	133	2126	42	18	65	..	..	10	7	..	1476	11050	90	7502	3458	1076
Total .....	329	821	62	61	291	81	1127	6632	542	848	1066	44	679	1158	987	2408	25638	1508	685	2272	27	27	492	569	9	51908	261560	1575	165367	94618	23411
Died.....	1	..	20	1	2	5	8	..	1	..	54	..	20	2	4	11	2	1	1	9	..	3	13	2	1	107	..	1575	..	..	..

As the determination of the diseases in 94,618 patients, who ceased to attend, could not be traced, no satisfactory results can be obtained by the insertion of the deaths under the several diseases.



TABLE II.—Showing the Cures among the Out-Patients treated in the Several Dispensaries.

Number of Half-yearly Reports.	Of the Digestive Function.				Of the Respiratory Function.		Of the Sanguineous Function.																											
	Cholera.				Icterus.	Asthma.	Febris.			Inflam- matio.			Hepa- titis.		Splenitis.	Opthal- mia.		Dysen- teria.		Rheuma- tismus.		Variola.	Phthisis Pulmonalis.	Scrofula.	Syphilis		Elephantiasis.	Scorbutus.	Gangrena.	Ulcers.				
	Colica.	Diarrhœa.	Biliosa.	Spasmodica.			Intermittens.	Remittens.	Continua.	Pneumon and Abscesses.	Cephalica.	Thoracica.	Enterica.	Acuta.		Chronica.	Acutus.	Chronicus.																
4	Bhowanipoor .....	175	138	26	13	15	21	408	60	367	1043	12	10	18	5	19	170	77	150	7	81	79	93	625	..	..	18	553	168	11	..	8	908	
6	Mooredhabad .....	5	157	24	9	..	..	1488	5	8	504	2	22	2	..	..	102	3	75	20	..	197	2	934	..	..	1	251	103	4	..	..	919	
6	Pooree, or Juggernath .....	18	118	6	90	1	2	319	3	..	70	..	1	11	..	..	9	12	18	20	118	130	44	66	2	..	1	135	79	2	..	..	292	
5	Chittagong .....	10	187	94	19	4	86	584	8	221	205	..	238	..	2	45	84	61	78	202	89	53	215	752	2	18	5	126	139	..	2	..	694	
6	Dacca .....	479	273	204	130	7	64	1383	240	744	220	82	80	29	19	8	680	108	35	186	148	55	498	702	3	1	3	315	132	7	..	8	1119	
6	Patna .....	48	1223	62	149	12	370	876	53	401	760	169	5	2	76	174	586	353	114	1069	893	119	2687	1299	9	20	131	1264	401	56	4	3	1465	
6	Benares .....	144	717	288	151	71	212	1189	846	125	2057	10	11	6	69	94	549	462	461	581	489	384	740	816	46	2	186	2123	1633	18	21	121	2609	
6	Allahabad .....	213	827	16	30	4	67	1490	714	183	821	..	128	10	1	4	101	145	156	437	120	214	90	506	41	..	15	706	461	..	1	27	1172	
2	Furruckabad .....	11	176	1	..	..	..	104	5	98	144	1	2	..	1	..	13	8	15	24	52	21	50	32	..	..	..	102	36	..	..	..	205	
6	Cawnipoor .....	231	207	12	..	3	31	310	630	5	463	..	32	..	..	6	47	42	161	309	18	142	47	1649	..	..	32	579	637	2	..	..	810	
6	Agra* .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Muttra .....	58	406	..	29	2	..	257	8	248	324	..	..	..	..	..	18	12	168	420	13	102	..	280	..	..	..	..	111	38	..	..	..	403
6	Delhi .....	350	309	..	..	2	207	2371	235	639	108	14	66	146	..	14	288	104	242	3	18	340	64	938	6	..	14	546	187	..	..	..	855	
6	Bareilly .....	520	676	4	12	2	222	1070	230	1403	574	6	24	2	3	..	6	448	29	1134	336	..	512	886	..	..	2	855	57	..	132	2	2251	
5	Moradabad .....	182	230	21	1	4	22	1172	44	15	140	5	307	20	4	20	55	67	293	20	20	43	193	769	..	..	25	225	241	4	..	8	706	
1	Shajehanpoor .....	84	40	2	..	..	7	132	4	..	53	..	1	1	..	1	7	13	34	118	25	16	35	122	..	8	18	27	23	..	..	1	130	
4	Jubbulpoor .....	64	422	1	138	3	1	1272	875	12	344	..	44	4	1	..	41	50	89	127	106	79	74	316	3	..	4	168	130	..	..	..	658	
Total .....		2592	6106	737	771	130	1312	14425	3969	4469	7340	301	971	251	181	365	2756	1965	2118	4677	2526	1974	5344	10692	112	49	455	8086	4465	104	162	180	15196	

\* All the cases in the Agra Reports returned as *relieved* only, and not as "*cured*;" they are therefore omitted.

TABLE II.—continued.

Number of Half-yearly Reports.	Of the Nervous Function.						Of the Sexual Function.	Of the Excrement Function.						From External Violence.						Total.							
	Mania.	Cataracta.	Tetanus.	Chorea.	Epilepsia.	Apoplexia.		Paralysis.	Gonorrhoea.	Tumores.		Hydrops.		Hydrocele.		Dysuria.	Lepa.	Psora and Herpes.	Contusio.		Luxatio and Subluxatio.	Vulnus.			Fractura.	Concussio Cerebri.	Alii Morbi.
4	16	34	4	..	1	12	45	116	1	29	62	..	16	17	11	41	881	201	38	159	8	2	14	14	..	1269	8271
6	4	..	..	2	..	..	2	203	1	12	13	..	..	16	..	2	933	18	133	82	..	..	16	5	..	125	6404
6	9	3	..	1	2	..	..	34	..	6	53	..	1	5	..	6	151	11	5	24	..	..	..	10	..	348	2236
5	7	2	..	..	13	5	16	345	..	27	27	..	18	6	11	1	1292	103	20	373	..	..	..	8	..	4951	11468
6	14	30	..	6	..	..	6	121	3	34	9	4	18	29	12	8	830	60	41	88	..	..	9	35	..	3970	13289
6	9	114	1	..	4	..	74	518	116	17	86	..	28	27	..	2	2286	163	4	27	21	..	46	5	3	4451	22855
6	83	47	16	..	13	..	95	948	15	220	59	1	25	346	241	56	1660	85	155	236	4	11	88	199	..	804	22638
6	..	23	2	..	2	..	..	262	3	24	25	..	2	39	44	2	994	87	5	127	..	1	30	15	..	3437	13824
2	..	..	..	..	..	..	..	14	..	8	..	..	..	2	15	..	169	..	2	..	..	..	1	..	..	551	1864
6	8	..	..	..	1	..	5	239	..	31	16	..	24	43	33	..	975	208	13	105	..	..	..	10	..	1937	10053
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	61	..	2	6	..	..	1	..	..	661	1	3	4	..	..	15	..	..	745	4396
6	..	15	..	..	6	..	8	434	1	22	25	2	7	10	2	9	779	57	35	106	..	..	1	12	..	2574	12173
6	1	1	1	..	..	..	6	183	7	19	5	..	2	3	90	..	2024	104	2	219	..	..	134	18	2	3874	18102
5	8	12	..	12	3	..	20	136	8	17	7	..	14	21	49	5	1264	33	20	138	..	..	17	23	..	2165	8828
1	..	5	..	..	..	..	18	23	..	..	5	..	..	1	14	2	187	71	4	37	..	..	9	10	..	177	1464
4	3	4	..	1	1	..	1	105	..	8	13	..	..	8	21	5	1191	37	16	60	..	..	12	5	..	984	7502
	162	290	24	22	33	30	296	8742	163	476	411	7	156	574	543	139	16277	1239	496	1785	33	14	392	369	5	32362	165367

All the cases in the Agra Reports returned as *relieved* only, and not as "*cured*," they are therefore omitted.



TABLE III.—Showing the Deaths among the Out-Patients Treated.

Number of Half-yearly Reports.	Of the Digestive Function.				Of the Respiratory Function.	Of the Sanguineous Function.																													
	Colica.	Diarrhoea.	Cholera.			Icterus.	Asthma.	Febris.			Phlegmon & Abscesses.	Inflammatio.			Hepatitis.		Splenitis.	Optical-mia.		Catarrhus.	Dysenteria.		Rheumatismus.		Variola.	Phtisis Pulmonalis.	Scrophula.	Syphilis.		Elephantiasis.	Scorbutus.	Gangrena.	Ulcus.		
			Biliosa.	Spasmodica.				Intermittens.	Remittens.	Continua.		Cephalica.	Thoracica.	Enterica.	Acuta.	Chronica.		Acuta.	Chronica.		Acutus.	Chronicus.	Acuta.	Chronica.				Primativa.	Consecutiva.						
4	..	..	1	5	..	1	..	1	1	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..		
6	..	..	1	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
6	99	99	188	188	..	10	8	..	..	..	..	1	..	..	..	..	..	..	..	..	93	83	1	..	..	..	..	..	..	..	..	..	..	..	
5	4	4	1	1	..	11	5	..	..	..	..	1	..	..	..	..	41	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
6	6	6	80	43	..	3	..	..	..	..	..	..	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
6	24	24	5	23	..	1	1	..	..	..	..	5	..	..	..	..	3	..	..	..	9	17	..	..	..	..	..	..	..	..	..	..	..	..	..
6	18	18	30	39	..	2	10	..	2	2	..	3	..	..	..	..	3	..	..	..	6	11	..	..	..	..	..	..	..	..	..	..	..	..	..
6	29	29	18	1	1	1	7	..	3	..	..	..	..	..	..	..	3	..	..	..	..	42	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..													

TABLE III. — continued.

Number of Half-yearly Reports.		Of the Nervous Function.							Of the Excrement Function.							From External Violence.							Total.				
		Mania.	Catareacta.	Tetanus.	Chorea.	Epilepsia.	Apoplexia.	Paralysis.	Gonorrhoea.	Tumores.		Hydrops.				Dysuria.	Lepra.	Psora and Herpeo.	Contusio.	Luxatio & Subluxatio.	Vulnus.				Fractura.	Concussio Cerebri.	Alii Morbi.
										Bronchocele.	Tumores.	Anasarca.	Hydrothorax.	Ascites.	Hydrocele.						Inscisum.	Scloppetorum.	Anguinum.	Ambustio.	Fractura.	Concussio Cerebri.	
4	Bhowanipoor .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	11
6	Moorsheadabad .....	..	..	..	..	..	..	..	..	..	..	38	..	1	..	..	..	..	..	..	..	..	..	..	..	..	16
6	Poore, Juggemath .....	1	..	..	..	..	..	..	..	..	..	3	..	4	..	..	..	..	..	..	..	..	..	1	..	..	560
5	Chittagong .....	..	..	..	..	..	..	..	..	1	..	3	..	..	..	..	..	..	..	1	3	..	..	..	..	..	15
6	Dacca .....	..	..	5	..	..	..	..	..	..	..	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	207
6	Patna .....	..	..	..	..	1	2	1	..	..	..	3	..	2	..	..	..	2	..	2	1	1	..	..	..	..	124
6	Benares.....	..	..	6	..	..	2	3	..	..	..	3	..	5	..	..	..	..	..	..	..	..	..	..	..	..	177
6	Allahabad .....	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	167
2	Furruckabad .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
6	Cawnpoor.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Agra .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Muttra .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Delhi .....	..	..	..	1	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	4
6	Bareilli .....	..	..	3	1	1	..	4	..	..	..	4	..	3	2	..	..	..	..	2	2	1	2	1	1	..	1
5	Moradabad .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	135
1	Shajehanpoor .....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	64
4	Jubbulpoor .....	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	3
	Total Died .....	1	..	20	1	2	5	8	..	1	..	54	..	20	2	4	11	2	1	1	9	..	3	13	2	1	107
																											1575



TABLE IV.—*Showing the Deaths among the House-Patients Treated.*

Dispensaries.	Of the Digestive Function.				Of the Respiratory Function.		Of the Sanguineous Function.																							
	Colica.	Diarrhoea.	Cholera.		Icterus.	Asthma.	Febris.			Inflammatio.			Hepatitis.		Ophthalmia.		Dysenteria.		Rheumatismus.		Variola.	Phthisis Pulmonalis.	Scrofula.	Syphilis.		Elephantiasis.	Scorbutus.	Gangrena.	Ulcus.	
			Biliosa.	Spasmodica.			Intermittens.	Remittens.	Continua.	Cephalica.	Thoracica.	Enterica.	Acuta.	Chronica.	Acutus.	Chronicus.	Primativa.	Consecutiva.												
Bhowanipoor .....	1	9	1	2	1	1	5	1	1	1	..	..	..	1	3	..	..	2	..	2	..	..	..	..	..	..	..	2	1	
Moorsheadabad .....	1	25	1	4	1	..	6	1	..	..	2	..	..	..	..	..	..	40	79	..	..	..	..	..	..	..	..	1	1	
Poore .....	..	2	1	1	1	..	5	1	..	..	..	..	..	..	9	..	..	6	2	2	..	..	..	..	..	..	..	1	1	
Chittagong .....	2	2	6	1	1	..	2	1	..	..	..	..	..	4	..	..	2	2	2	1	1	1	..	..	..	..	..	1	1	
Dacca .....	2	2	2	3	1	..	2	1	..	..	..	..	..	3	..	..	2	2	2	1	1	..	..	..	..	..	..	1	1	
Patna .....	..	5	1	1	1	..	2	1	..	2	..	..	..	3	..	..	..	1	2	1	1	..	..	..	..	..	..	1	1	
Benares .....	..	4	..	..	..	..	8	1	..	3	..	..	..	..	1	..	..	3	26	13	..	..	..	..	..	..	..	4	5	
Allahabad .....	..	55	2	..	..	1	24	5	1	3	..	..	..	1	..	..	2	1	..	..	..	..	..	..	..	..	..	8	319	
Cawnpoor .....	3	4	..	4	..	..	1	3	1	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	5	1	
Agra .....	8	1	..	..	..	..	1	5	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	1	1	
Muttra .....	..	4	2	..	..	..	4	3	3	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	2	1	
Delhi .....	..	1	..	..	..	1	3	4	1	..	..	..	..	..	..	..	..	3	1	..	..	..	..	..	..	..	..	1	1	
Bareilly .....	..	6	..	1	1	..	3	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Moradabad .....	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	11	..	..	..	..	..	..	..	..	..	..	1	..
Jubbulpoor .....	..	5	..	5	..	..	..	..	..	..	..	1	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	1	..
Total Died .....	7	119	13	22	1	4	36	47	8	6	6	1	1	6	20	1	7	24	176	5	20	2	7	..	16	14	..	..	1831	1831

TABLE IV.—continued.

Dispensaries.	Of the Nervous Function.							Of the Excrement Function.							From External Violence.						Total.							
	Mania.	Catarracta.	Tetanus.	Chorea.	Epilepsia.	Apoplexia.	Paralysis.	Gonorrhoea.	Tumores.		Hydrops.				Dysuria.	Lepra.	Psoa and Herpes.	Contusio.	Luxatio & Subluxatio.	Vulnus.			Ambustio.	Fractura.	Concussio Cerebri.	Alii Morbi.		
									Bronchocele.	Tumores.	Anasarca.	Hydrothorax.	Ascites.	Hydrocele.						Incisum.		Scloppetorium.					Anginuum.	
Bhowanipoor .....	..	..	1	..	..	1	..	..	..	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	
Moorsheadabad .....	..	..	1	..	..	..	..	..	..	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	91	
Poore .....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	144	
Chittagong .....	..	..	1	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	20	
Dacca .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	49	
Patna .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	29	
Benares .....	..	..	2	..	..	..	1	..	..	7	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	81	
Allahabad .....	..	..	..	..	..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	
Cawnpoor .....	2	..	..	..	..	..	..	..	..	3	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	246	
Agra .....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	29	
Muttra .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	
Delhi .....	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	36	
Bareilly .....	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37	
Moradabad .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jubbulpoor .....	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	45
Total Died....	2	..	4	..	..	5	8	2	8	42	1	32	1	4	4	4	..	2	1	19	2	..	8	17	5	55	847	

The great amount of deaths at Pooree is accounted for by its being the Pilgrim Hospital at the Temple of Juggernath; and the poor pilgrims were taken up from the road side and carried in a dying state into the hospital.



TABLE V.—Showing the Admissions and Deaths among the House-Patients treated in the Bengal Dispensaries and those of the North-West Provinces.

Number o Half-yearly Reports.	Dispensaries.	Of the Digestive Function.				Of the Respiratory Function.		Of the Sanguineous Function.																								
		Colica.	Diarrhoea.	Cholera.		Icterus.	Asthma.	Febris.			Phlegmon and Abscesses.	Inflammatio.			Hepati-tis.		Opthal-mia.		Dysen-teria.		Rheut-matis-mus.		Variola.	Pththisis Pulmonalis.	Scrofula.	Syphilis		Elephantiasis.	Scorbutus.	Gangrena.	Ulcus.	
				Biliosa.	Spasmodica.			Intermittens.	Remittens.	Continua.		Cephalica.	Thoracica.	Enteritica.	Acuta.	Chronica.	Acuta.	Chronica.														
4	Bhowanipoor.....	1	1			3	2	2	2	2	2	1		1						8	5	2			2	3					4	4
4	Moorsheadabad .....	2	13				3	3	3	3	3			11					4	57	19	22			1	17	48				4	4
5	Pooree, Juggernath .....	12	61			1	64							6					34	155	9	78				55	6				96	
6	Chittagong.....	1	6			2	3							3					8	9	4	4				4	3				26	
6	Dacca .....	3	10			5	1							5					13	2	42	3				11	27				33	
8	Patna .....	1	4			2	6							49					6	7	12	12				54	6				72	
1	Benares .....	1	1			3	16							17					13	1	32	19				236	123				1	
6	Allahabad .....	1	11			8	4													7	14	3				4	6				4	
6	Furruckabad* .....	8	93			28	28							2						59	6	6				165	78				116	
6	Cawnpoor .....	7	3			6	3							1					1	2		137				8	1				5	
2	Agra .....	10	8			48	1							3					1	3		9				8	4				19	
6	Muttra .....	1	10			30	3							1					7	6	1	21				8	6				24	
6	Delhi .....	1	13											6						2	16	8				23	2				20	
9	Bareilly .....																															3
	Moradabad* .....																															
	Shahjehanpoor* .....																															
2	Jubbulpoor.....	2	17			17	3							14					11	25	4	8				30	26				12	
	Total .....	41	275	28	43	2	137	91	216	91	137		2	119	15	7	119	40	340	147	327	3	13	26	618	334	13			64	462	
	Died .....	7	119	13	22	1	9	8	47	8	9			20	6	1	20	1	176	5	20	2	7		16	14			18	31		

\* No Return.

TABLE V.—continued.

Number of Half-yrly. Reports	Of the Nervous Function.						Of the Excrement Function.						From External Violence.						Total.	Died.	Cured.	Relieved, or Absconded.								
	Mania.	Catarracta.	Tetanus.	Chorea.	Epilepsia.	Apoplexia.	Paralysis.	Gonorrhoea.	Tumores		Hydrops.				Lepra.	Psora and Herpes.	Contusio.	Luxatio and Subluxatio.					Vulnus.			Fractura.	Concussio Cerebri.			
									Bronchocele.	Tumores.	Anasarca.	Hydrothorax.	Ascites.	Hydrocele.									Dysuria.							
4	Bhowanipoor	8	1	..	..	4	1	..	2	1	2	2	..	..	..	..	..	..	..	..	..	..	..	..	6	62	10	48	8	
4	Moorsheadabad	2	..	..	..	..	1	38	1	3	40	2	1	..	..	..	..	..	..	..	..	..	..	..	3	220	84	91	45	
5	Poorree, Juggernath	6	1	..	..	..	6	9	3	1	3	7	..	..	..	..	..	..	..	..	..	..	..	251	1295	146	440	709		
5	Chittagong	..	..	..	..	..	2	1	3	6	1	8	..	..	..	..	..	..	..	..	..	..	..	16	203	20	121	62		
6	Dacca	99	..	..	..	..	8	..	4	6	3	12	5	1	..	..	..	..	..	..	..	..	..	37	288	49	168	71		
6	Fatna	2	..	..	..	..	1	..	1	2	3	2	..	..	..	..	..	..	..	..	..	..	..	32	381	29	291	61		
9	Benares	1	4	..	..	..	..	1	..	5	4	..	9	..	..	..	..	..	..	..	..	..	..	16	870	81	688	101		
1	Allahabad	..	..	..	..	..	..	1	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	6	93	14	43	36		
6	Furruckabad*	9	..	..	..	..	14	8	14	9	..	87	2	..	..	..	..	..	..	..	..	..	..	103	1243	246	820	177		
6	Cawnpoor	2	..	..	..	..	1	..	1	3	7	7	..	..	..	..	..	..	..	..	..	..	..	11	112	29	54	29		
2	Agra	3	..	..	..	..	1	..	2	2	9	9	..	..	..	..	..	..	..	..	..	..	..	36	149	16	85	48		
6	Muttra	8	..	..	..	..	1	..	5	6	..	9	1	..	..	..	..	..	..	..	..	..	..	53	336	36	263	37		
6	Delhi	2	..	..	..	..	2	4	4	4	7	4	..	..	..	..	..	..	..	..	..	..	..	18	302	37	177	88		
6	Bareilly	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
6	Moradabad*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
6	Shahjehanpoor*	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
6	Jubbulpoor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
6	Total	148	6	13	9	43	62	9	41	109	11	117	6	93	28	95	40	27	316	5	1	25	168	18	608	5896	842	3504	1556	..
6	Died	2	4	..	..	5	8	2	3	7	42	1	32	1	4	4	..	2	1	19	2	8	17	5	55	..	842	..	..	..

\* No Return.

N.B. With respect to the mortality, as the cases were those brought in only at the last extremity, no satisfactory conclusion can be drawn on the subject of the treatment, whether successful or otherwise. As the figures stand, the deaths were about 14·3 per cent. of the patients. The deaths at Poorree are accounted for by its being the Juggernath Pilgrims' Hospital; and the numerous patients were picked up upon the roads in a dying state.



TABLE VI.—Showing the average number of Days each Disease was under Treatment.

Dispensaries.	Of the Digestive Function.				Of the Respiratory Function.		Of the Sanguineous Function.																										
	Colica.	Diarrhoea.	Cholera		Icterus.	Asthma.	Febris.			Phlegmon and Abscesses.	Inflam- matio.			Hepa- titis.		Splenitis.	Optthal- mia.		Catarrhus.	Dysen- teria.		Rheuma- tismus.		Variola.	Phtthisis Pulmonalis.	Scrofula.	Syphilis.		Elephantiasis.	Scorbutus.	Gangrena.	Ulcus.	
			Biliosa.	Spasmodica.			Intermittens.	Remittens.	Continua.		Cephalica.	Thoracica.	Enterica.	Acuta.	Chronica.		Acuta.	Chronica.		Acutus.	Chronicus.	Primativa.	Consecutiva.										
Moorshedabad...Days	14	14	2	2	...	...	$\frac{10}{12}$	6	...	6	...	...	$\frac{2}{2}$	...	...	14	7	$\frac{2}{7}$	...	...	$\frac{14}{28}$	...	$\frac{14}{29}$	...	...	...	...	$\frac{14}{17}$	14	...	42	7	$\frac{8}{68}$
Dacca .....	$\frac{2}{4}$	$\frac{17}{19}$	$\frac{4}{8}$	$\frac{5}{6}$	...	16	$\frac{10}{38}$	$\frac{6}{11}$	6	$\frac{4}{5}$	$\frac{2}{2}$	4	6	$\frac{7}{5}$	$\frac{6}{14}$	$\frac{14}{34}$	$\frac{9}{17}$	16	6	$\frac{16}{17}$	50	13	23	18	...	...	...	$\frac{14}{16}$	51	...	...	$\frac{12}{146}$	
Benares .....	...	$\frac{8}{11}$	...	1	...	...	$\frac{10}{48}$	$\frac{9}{41}$	$\frac{5}{6}$	69	...	$\frac{16}{30}$	23	...	...	$\frac{14}{13}$	...	10	...	$\frac{6}{35}$	...	$\frac{12}{122}$	$\frac{18}{36}$	...	...	...	$\frac{30}{153}$	$\frac{25}{26}$	...	...	$\frac{12}{146}$		
Bareilly .....	3	$\frac{4}{33}$	7	...	5	...	$\frac{5}{10}$	$\frac{13}{45}$	5	...	...	...	...	...	...	8	...	...	...	$\frac{14}{28}$	9	23	$\frac{9}{36}$	...	...	...	5	...	...	67	10	$\frac{10}{20}$	
Moradabad .....	5	$\frac{4}{16}$	$\frac{1}{9}$	...	...	75	$\frac{7}{11}$	$\frac{7}{8}$	21	$\frac{11}{12}$	16	$\frac{13}{15}$	7	11	$\frac{8}{28}$	$\frac{20}{30}$	$\frac{3}{27}$	$\frac{12}{15}$	...	$\frac{18}{19}$	$\frac{7}{19}$	10	$\frac{9}{12}$	...	...	$\frac{60}{101}$	$\frac{11}{28}$	$\frac{14}{27}$	...	$\frac{16}{20}$	$\frac{10}{23}$		

TABLE VI.—continued.

Dispensaries.	Of the Nervous Function.							Of the Excrement Function.							From External Violence.							All Morbi.			
	Mania.	Catarrh.	Tetanus.	Chorea.	Epilepsia.	Apoplexia.	Paralysis.	Gonorrhoea.	Tumours.		Hydrops.				Dysuria.	Lepra.	Psora and Herpes.	Contusio.	Luxatio and Subluxatio.	Vulnus.			Fractura.	Concussio Cerebri.	
									Bronchocele.	Tumours.	Anasarca.	Hydrothorax.	Ascites.	Hydrocele.											
Moorshedabad...Days	14	...	...	...	...	...	...	$\frac{10}{14}$	...	7	$\frac{9}{12}$	...	...	...	...	120	7	...	$\frac{7}{56}$	10	$\frac{7}{12}$	...	...	...	...
Dacca .....	$\frac{4}{30}$	...	...	...	...	...	$\frac{17}{21}$	$\frac{11}{14}$	...	$\frac{6}{11}$	...	...	16	$\frac{5}{12}$	19	4	...	$\frac{1}{4}$	10	$\frac{6}{19}$	...	...	$\frac{24}{71}$	...	
Benares .....	...	...	...	...	39	...	...	5	51	...	$16\frac{1}{2}$	...	...	...	6	...	...	...	...	$\frac{22}{178}$	13	22	$\frac{36}{237}$	...	
Bareilly .....	...	...	...	...	...	...	...	$\frac{10}{41}$	6	...	...	11	...	...	$\frac{12}{65}$	...	...	...	8	...	...	...	$\frac{7}{81}$	10	...
Moradabad .....	$\frac{8}{112}$	$\frac{13}{16}$	...	...	...	...	...	$\frac{14}{13}$	...	$\frac{16}{53}$	...	20	12	$\frac{4}{8}$	$\frac{100}{108}$	$\frac{10}{37}$	...	...	$\frac{6}{9}$	$\frac{12}{26}$	...	$\frac{14}{21}$	$\frac{20}{31}$	...	

NOTE.—The explanation of the  $\frac{4}{36}$ ,  $\frac{11}{112}$ , &c. &c. is, that the average time each disease was under treatment varied at different periods, for  $\frac{4}{36}$  4 days to 36 days, from  $\frac{8}{112}$  8 days to 112 days, and  $\frac{11}{14}$  from 11 days to 14 days.



## APPENDIX.

THE Cholera and Vaccination Returns, together with those of the surgical operations from the several Dispensaries, being of too extended and detailed a nature for insertion in the Journal of the Statistical Society, I merely annex a specimen of the several returns to show their form and character. The detailed reports from many of the native sub-assistant surgeons of their treatment of local diseases, and of their surgical operations, particularly in cataract and lithotomy, are not less interesting than instructive.

The only census furnished of the population of a town or city where a Dispensary is located, is that of Allahabad, annexed.

The following abstract will show the nature of the operations performed at Cawnpoor, from 1st August to 31st January, 1845:—

Names.	Age.	Sex.	Diseases.	Operations.	Remarks.
Begay.....	27	Female..	Cartilaginous tumour on the buttock.	Removed .....	Successful.
Laloo .....	45	Male ....	Urinary calculus	Lateral operation lithotomy.	Ditto.
Inderjit .....	14	Ditto ....	Gangrene of the arm.	Amputation at the shoulder.	Ditto.
Lallawa .....	39	Ditto ....	Urinary calculus	Lateral operation lithotomy.	Ditto.
Gadha .....	8	Ditto ....	Ditto .....	Ditto .....	Ditto.
Horeojuon ....	45	Ditto ....	Ascites .....	Tapped .....	Relieved.
Motty .....	44	Ditto ....	Steatomatous tumour on scalp	Removed.....	Successful.
Voora.....	5	Ditto ....	Urinary calculus	Lateral operation lithotomy.	Ditto.
Alwar.....	10	Ditto ....	Ditto .....	Ditto .....	Ditto.
Pirbux .....	64	Ditto ....	Ditto .....	Ditto .....	Died.
Permo .....	33	Ditto ....	Elephantiasis of the penis.	Operated on; body of penis saved.	Successful.
Amirbux ....	20	Ditto ....	Sloughing cancer	Amputation of the penis.	Ditto.
Nundkissore.	15	Ditto ....	Urinary calculus	Lateral operation lithotomy.	Ditto.
Howagun ....	44	Ditto ....	Fungus hæmatodes of eye.	Extirpation of the eye.	Ditto.
Rambux.....	30	Ditto ....	Tumour on the scalp.	Removed.....	Ditto.
Kissory .....	14	Female..	Sloughing of the hand.	Amputation above the wrist.	Ditto.
Kisna.....	2	Male ....	Urinary calculus	Lateral operation lithotomy.	Ditto.

*Statement of Cholera Patients treated in the different Thanahs of the City of Patna, by the Dispensary Apprentices, during the Months of April and May, 1841.*

Disease.	Admitted.	Cured.	Died.	Remark.
Cholera .....	2,016	1,810	206	10 per cent. died.
Total .....	2,016	1,810	206	

(Signed) **RAM ESHUR AWASTHEE,**  
*In charge Government Dispensary.*  
**PATNA,**  
*18th November, 1841.*

*Half-Yearly Vaccine Return of the Cawnpore Government Dispensary, from 1st August, 1844, to 31st of January, 1845.*

Sta- tions.	Corps and Medical Officer.	Success- ful.	Unsuc- cessful.	Doubt- ful.	Total.	Subjected to Bryce's Tests.	Grand Total.	
Cawnpore.	Mr. Assistant Sur- geon E. Goodeve, Superintendent. Native Vaccinator							
	Durrewah .....	5	3	....	8	....	8	Aug.
	Ditto .....	6	4	....	10	....	10	Sept.
	Ditto .....	5	4	....	9	....	9	Oct.
	Ditto .....	8	5	1	14	....	14	Nov.
	Ditto .....	7	3	2	12	....	12	Dec.
	Ditto .....	5	4	1	10	....	10	Jan., 1845.
	Total .....	36	23	4	63	....	63	

*Census of the City of Allahabad, January 1st, 1841.*

Name of Thannah.	Number of Houses.	Number of Inhabitants.		Total Number of Inhabitants.
		Hindoos.	Mussulmans.	
Kutwallee .....	2,245	5,852	2,716	8,568
Badshahumundnee	2,302	7,214	3,559	10,773
Daragunge .....	1,485	5,949	1,149	7,098
Kitgunge .....	3,145	9,471	2,573	12,044
Dureeabad .....	1,769	5,756	2,674	8,430
Khooldabad .....	1,291	2,779	3,594	6,373
Kuttra .....	2,378	6,994	4,766	11,760
Total .....	14,615	44,015	21,031	65,046



*Abstract of the "Statistics of Crime in England and Wales, from 1839 to 1843."* By The Rev. WHITWORTH RUSSELL.

[Read before the Statistical Society of London, 24th November and 22nd December, 1845.]

By an examination of the following tables, it will be found that, in the quinquennial period under consideration, a considerable increase has taken place both in the number of assize and sessions prisoners, and of those under summary convictions.

The increase of assize and sessions prisoners in England and Wales, has been .....	13·5 per cent.
That of summary convictions.....	20·8   ,,
<hr/>	
The total increase upon the two classes .....	34·3   ,,

The year 1842 exhibits the greatest amount of increase, namely:—

In assize and sessions prisoners.....	13·5 per cent.
In summary convictions .....	9·9   ,,
<hr/>	
Total increase in that one year .....	23·4   ,,

Whereas in the following year, 1843, there is a decrease of 5·7 per cent. in assize and sessions prisoners, and only an increase of 2·4 per cent. in the summary convictions, giving a total of decrease of 3·3 per cent.

I am strongly of opinion that the great increase of crime in 1842 may fairly and mainly be attributed to the general distress, commercial, manufacturing, and agricultural, which prevailed throughout the country during that year; and that the decrease in 1843 was caused by returning prosperity in all those interests in that year. I am confirmed in this opinion by the fact, that the check which was given to crime in 1843 was still more decidedly felt in 1844 and 1845.

	Assizes and Sessions.	Summary Convictions.	Total.
The decrease in 1844 was.....	13·5 per cent.	4·0 per cent.	17·5 per cent.
Ditto .... 1845 .....	7·9   ,,	9·1   ....	17·0   ,,
<hr/>			
Showing a total decrease in the } two years of .....	21·4	13·1	34·5

The following tables will more clearly exhibit the increase or decrease in the two classes of crime (assize and sessions prisoners and summary convictions) during the quinquennial period under consideration, namely, 1839 to 1843, and in that which includes the two following years, namely, 1841 to 1845.

*Increase or Decrease of the Two Classes of Crime between the several years of the Quinquennial Period, 1839-1843.*

Locality.		Total Number of Pri- soners in each Year.		Proportion per 100,000 of the Total Population.		Total Population.
		Assizes and Sessions.	Summary Convictions.	Assizes and Sessions.	Summary Convictions.	
England and Wales.	1839 ....	24,956	57,455	161·1	371·0	15,492,867
	1840 ....	27,093	63,979	172·6	407·6	15,698,044
	1841 ....	27,085	63,296	170·3	397·9	15,906,741
	1842 ....	31,160	70,507	193·3	437·4	16,118,591
	1843 ....	29,871	73,196	182·9	448·1	16,333,659

*Increase or Decrease.*

		Years.	Assizes and Sessions.	Summary Convictions.	Total.
England and Wales	{	1842 over 1841....	+ 13·5	+ 9·9	+ 23·4
		1843 „ 1842....	- 5·7	+ 2·4	- 3·3
		1844 „ 1843....	- 13·5	- 4·0	- 17·5
		1845 „ 1844....	- 7·9	- 9·1	- 17·0
	{	1843 over 1841....	+ 7·4	+ 12·6	+ 20·0
		1844 „ „ ....	- 5·6	+ 8·2	+ 2·6
		1845 „ „ ....	- 13·9	- 0·8	- 14·7

A still more satisfactory conclusion, however, may be drawn from these data. The tables cannot show the amount of actual crime, but only of such as has been detected, and become the subject of legal cognizance. Several causes have been in operation which must necessarily have increased the proportion of detected crime to that actually committed. Amongst these the following may be enumerated :—a better organized, more numerous, and more active police; the mitigation of the criminal law, and the consequent increase of prosecutions; an improved prison discipline, and therefore a greater willingness on the part of the public to prefer charges; vast facilities for rapid communication, inevitably leading to a greater amount of detection. These causes must occasion a greater proportion of the committed crime to be detected; and if even detected crime decreases, then it necessarily follows that actual crime must, to a still greater extent, have diminished.

The tables of summary convictions are deserving very serious consideration. Great as is the annual number of commitments under summary convictions, amounting in 1843 to more than 73,000, this does not exhibit the entire amount of this class of detected crime, inasmuch as all those who pay their fines or produce the required sureties, are discharged at the time, and are not entered in any criminal return. These, who are really convicted offenders, would, no doubt, if their numbers could be ascertained, greatly swell the total of summary convictions.



It is further to be borne in mind that no estimate can be formed of the proportion which the acquitted bear to the convicted under the summary jurisdiction of magistrates. No return of any kind is made by justices of the number or nature of the cases dismissed by them, either when administering justice at their own houses, or when acting in petty sessions. This, under many points of view, and for many reasons which might be assigned, is a most important omission. I venture to submit, that much good would result if a return was required to be made by the magistrates to the Home Office, about once a month, showing the number and nature of the charges brought before them, the numbers committed and discharged, together with a copy of each commitment, bearing upon the face of it the statute and section under which the commitment is made. Such a requirement would secure increased care and accuracy in conducting this branch of magisterial duty, and would bring together a body of important facts with reference to large classes of crime, respecting which little or nothing is known at present.

Much interesting information will be found in the tables which show the result of proceedings at assizes and sessions. The different counties of England furnish materials for very important investigations on the comparisons between alleged and proved criminality. The proportion of convictions and acquittals varies very greatly in the several counties; for instance, the proportion of the convicted to the committed prisoners, in 1839, rose in certain districts over others at a rate of no less than 79·1 per cent., and in 1843 to 43·4 per cent.; while the acquitted to the committed show the enormous difference of 486 per cent. in 1839, and of 156 per cent. in 1843, those counties being selected which show the extreme variations. In fact, the variations will be observed to be so great, and the increases and decreases so fluctuating, that they need no comment. They manifest serious defects in the existing system, and are deserving of a close investigation.

On reference to the tables which exhibit the terms of imprisonment before trial, it will be seen that they extend, in many instances, to considerable periods. It cannot be denied, that a long term of imprisonment before trial is an evil of no common magnitude, and should be diminished in every possible manner. On the other hand the extremely short terms of imprisonment under summary convictions (89·2 per cent. being under three months) are anything but calculated to repress crime, and to deter the prisoner committed for a first offence from pursuing the fatal career upon which he has unhappily entered.

Convictions under the Game Laws have augmented in a degree beyond all other crimes, during the quinquennial period to which the tables refer. The increase from year to year has been continual throughout the period; and from 1839 to 1843, it has amounted to 67·4 per cent.

In the last two years, however, Game Law convictions have decreased in a manner even more remarkable than their previous increase. Whilst in 1843, over 1842, there was an increase of + 18·2 per cent., in 1844, over 1843, there was a decrease of — 21·1 per cent.; and again, in 1845, over 1844, a further decrease of — 31·6. The following tables will exhibit this more clearly:—

Game Law Convictions.

Locality.		Number of Prisoners in each Year of the Quinquennial Period.	Proportion per 100,000 of Total Male Population.	Total Male Population.
England and Wales.	1841....	2,862	36·8	7,771,094
	1842....	3,631	46·1	7,874,836
	1843....	4,348	54·5	7,980,219
	1844....	3,638	45·0	8,086,754
	1845....	2,800	34·2	8,194,713

Increase or Decrease.

Years.				Years.			
In 1842 over 1841	....	+	25·2	In 1843 over 1841	....	+	48·1
1843 „ 1842	....	+	18·2	1844 „	....	+	22·3
1844 „ 1843	....	-	21·1	1845 „	....	-	7·6
1845 „ 1844	....	-	31·6				

Whilst returning prosperity and more regular employment may have had their influence in producing this truly gratifying result, these causes, considered alone, cannot, I think, account for the extent to which the reduction has been carried. The great attention which has of late been given to the question of the operation of the Game Laws, and the requirement that copies of all convictions under those laws shall be transmitted to the Home Office, have, I feel convinced, largely contributed to this important falling off in one of the most demoralizing and destructive classes of crime.

But, perhaps, the least satisfactory feature in the whole of the following tables, is the lamentable state of ignorance which prevails throughout all classes of offenders. It must be borne in mind that all the calculations in this paper relating to education have reference only to the amount of the simplest rudimental instruction amongst the several classes of offenders—the mere mechanical process of reading and writing; and if the state of instruction in this respect is found to be so seriously defective, it may confidently be affirmed, that it is so to a much greater extent as regards that intellectual, moral, and religious training, to which youth should be subjected, and which alone can deserve the term of education.

Now, among the prisoners in England and Wales, on the annual mean of the five years, 1839 to 1843, there were:—

	Assizes and Sessions.	Summary Convictions.
Prisoners who can neither read nor write.....	9,530 or 34·9 per cent.	26,924 or 38·1 per cent.
Who can read only.....	6,329 or 22·5 „	13,932 or 20·6 „
Who can read or write badly....	9,598 or 34·3 „	22,278 or 33·2 „
	.... 90·7 „	.... 91·9 „
Who can read and write well....	2,629 or 9·0 „	2,657 or 4·0 „

Hence it appears that out of the entire body of the prisoners at assizes and sessions, 90·7 per cent. had received little or no instruction;



and only 9 per cent. could read and write well; and of the prisoners confined under summary convictions, 91·9 per cent. had received little or no instruction, and only 4 per cent. could read and write well. No statement can be stronger as to the state of ignorance amongst criminals, even as regards the most elementary instruction. It may be considered as a point almost universally conceded, that to the want of moral and religious training, combined with proper intellectual and physical culture (all which is included in a just notion of education), we must ascribe the criminal courses to which numerous juvenile delinquents are addicted. These young offenders are, to a great extent, either orphans, or bereft by death of either father or mother, or too often deprived, by a subsequent marriage of the surviving parent, of the comfort and protection of home; or they are the illegitimate offspring of depraved and abandoned characters—they are thrown deserted upon the world, all equally friendless and uninstructed. Such are the unhappy children who infest our streets and throng our gaols. And to what other results can their neglected condition be expected to lead? Deprived of parents, or deserted by them, brought up in ignorance, destitute of principles, incessantly exposed to temptation, these poor children inevitably strike into the only path which appears open to them, and yield to the force which impels them to crime.

*Prisoners at Assizes and Sessions, and Results of Proceedings.*

Classes of Crimes.	Proportions to 100,000 of the Population.				
	1839	1840	1841	1842	1843
Class I. Offences against the Person. (As- saults predominate) .....	13·0	12·0	13·4	13·2	14·9
„ II. Offences with violence against Property .....	9·2	12·3	11·8	13·5	15·5
„ III. Offences without violence against Property (chiefly Larceny) ....	124·2	136·9	138·4	148·9	136·5
„ IV. Malicious Offences against Pro- perty .....	0·7	0·9	0·6	1·2	1·7
„ V. Offences against the Currency....	2·8	3·4	2·8	3·9	4·1
„ VI. Miscellaneous, not before included	7·9	7·7	7·5	13·5	8·5
Total.....	157·8	173·2	174·5	194·2	181·2

The successful prosecutions, *i. e.*, the convictions in England and Wales, present the following proportions in each of the five years, both as respects the total criminals, and the total population:—

Years.	Proportion per cent. of Convicted to Accused.	Proportion of Convicted to 100,000 of Total Population.
1839	71·0	114·4
1840	72·3	125·0
1841	72·2	123·0
1842	72·2	139·7
1843	71·7	131·2

Thus showing an increase on the convictions themselves, of 1 per cent., and with respect to the general population, 14·7 per cent.; a

result quite conclusive as to the positive and very material increase of the ascertained crimes of the higher class. The proportions of the acquittals (which include the prisoners acquitted at the bar, those against whom the bills were ignored by the grand jury, and those also who were not prosecuted), were as follows, in the several years:—

Years.	Proportion per cent. of Acquitted to Accused.	Proportion of Acquitted to 100,000 of Total Population.
1839	27·6	44·5
1840	26·5	45·7
1841	26·5	45·2
1842	26·8	51·8
1843	27·0	49·4

Thus showing a slight decrease (2·2 per cent.) as respects the prisoners themselves, and an increase of 11 per cent., as compared with the population of the country. As, however the acquittals are divided into three classes, it may interesting to see the proportions which each bears to the whole.

Proportion per cent. to Total Acquittals.					
Classes of Acquittals.	1839.	1840.	1841.	1842.	1843.
Acquittals at the Bar .....	64·1	66·1	64·6	67·8	70·1
No Bills Found .....	21·7	23·1	24·3	22·7	21·7
Prosecutions relinquished .....	14·2	10·8	11·1	9·5	8·2
Total acquittals .....	100·0	100·0	100·0	100·0	100·0

From this table it appears that the average annual proportion of prisoners against whom no bills were found by the grand juries amounts to 22·7 in a hundred, or nearly one quarter of all the acquittals, a proportion far too high to allow of the supposition that the initial investigations of offences are conducted with uniform care and diligence. The acquittals at the bar are seriously on the increase. The cases in which the prosecutions were relinquished have decreased 73·2 per cent. in the quinquennial period. The acquittals generally preponderate on the side of the females, the proportions being—of acquitted males 100, and of acquitted females 116·5; a circumstance probably owing to the unwillingness of juries to convict female prisoners when there remains even a shadow of doubt as to their guilt.

The numbers of those admitted as crown evidence, vary so little in each of the five years, as to require no remark beyond this:—that on an average of the five years the males bear to the females a proportion of 100 to 19. Of those bailed in court to appear at a subsequent tribunal, the number in 1842, which was the year of aggravated distress, was not above one-half of what it was in the other years of the quinquennial period, owing, in all probability, to the difficulty of getting good accountable bail in a season of general difficulty. Of those who did not appear to their recognizances, the numbers in 1842 were 50, whereas in the previous year there were only 16, and in the year following only 23. Criminal Insanity seems nearly stationary during the whole period; the average total bearing to



the total of crime during the five years, a proportion of only one to 1000—a sure proof that the assertions generally made respecting the large amount and increase of Criminal Insanity are wholly without foundation.

The different counties of England furnish materials for very important investigations on the comparisons between alleged and proved criminality. The proportions of the convictions and acquittals vary greatly in the several counties; and, in order that the successful prosecutions or convictions may be properly represented, a list of all the English Counties is furnished, arranged in a descending order, regulated by the proportion of the convictions to the committals, in the years 1839 and 1843.

Counties.	Proportion of Convictions to Committals.		Proportion of Acquittals to Committals.	
	1839.	1843.	1839.	1843.
Rutland .....	91·7	78·4	8·3	21·6
Notts .....	78·2	79·5	19·9	17·3
York .....	77·9	76·7	20·7	21·8
Lancaster .....	77·4	76·0	21·6	22·0
Warwick .....	79·9	73·2	19·8	26·4
Lincoln .....	73·1	76·9	25·5	22·3
Northumberland .....	70·6	77·3	29·4	22·7
Sussex .....	72·0	75·5	27·0	23·3
Bedford .....	81·2	65·8	18·7	32·9
Leicester .....	74·8	71·8	24·9	28·0
Huntingdon .....	67·9	78·1	30·2	20·5
Middlesex .....	72·0	73·8	25·0	24·1
Norfolk .....	72·6	73·1	25·3	26·0
Kent .....	71·7	73·8	27·2	25·1
Essex .....	72·6	72·3	25·0	27·2
Chester .....	73·4	71·9	24·1	28·0
Somerset .....	72·7	71·0	26·7	28·6
Suffolk .....	69·0	74·0	30·2	25·3
Derby .....	71·8	70·7	27·3	27·6
Durham .....	65·7	74·6	33·7	24·4
Westmoreland .....	71·7	69·8	28·3	20·8
Devon .....	69·8	69·4	29·1	29·8
Hants .....	70·2	68·6	29·0	30·4
Wilts .....	71·2	66·9	27·2	31·1
Northampton .....	71·0	66·2	28·2	32·5
Oxford .....	69·2	67·5	29·8	31·6
Cambridge .....	66·8	67·7	32·3	31·7
Worcester .....	71·7	63·4	27·4	36·3
Gloucester .....	68·4	66·4	31·0	33·3
Stafford .....	61·8	72·6	38·0	27·1
Cornwall .....	68·0	62·8	31·3	36·9
Salop .....	65·0	62·9	32·3	36·5
Monmouth .....	68·5	59·4	31·5	40·6
Hereford .....	60·9	64·6	38·2	35·4
Berks .....	60·4	61·7	37·5	36·8
Dorset .....	63·0	58·5	35·5	41·2
Bucks .....	63·8	67·5	38·5	30·6
Herts .....	65·9	64·4	33·7	34·9
Cumberland .....	69·5	83·9	29·9	16·1
Surrey .....	51·2	61·6	48·7	38·2
England .....	71·1	71·9	27·5	26·9

From this table, which is at once curious and important, it appears that the different localities of the country exhibit the most extraordinary variations. For instance, the proportions of the convicted to the committed prisoners in 1839 rose, in certain districts, over others at a rate of no less than 79·1 per cent., and in 1843 to 43·4 per cent.; while the acquitted to the committed show the enormous difference of 486 per cent. in 1839, and of 156 in 1843, those counties of England being selected which exhibit the extreme variations.

The classification of the various offences, and the exhibition of the modes of punishment with which they are visited, will be more fully seen by an examination of the very clear and comprehensive Criminal Tables for the five years drawn up at the Home Office. It is proposed here simply to furnish a few proportionals, comparing the different classes of crimes and punishments with the whole respectively, and showing, also, the proportionate kinds of punishments with which the different classes of crimes were respectively visited, the calculations being based on the annual mean of the quinquennial period. In this table the convictions and punishments of the six classes together make an exact hundred, while the punishments in each class constitute the totals of the convictions in the same class respectively.

#### *Re-committals.*

These tables, taken in connexion, show many curious results, both with respect to the re-committals generally, and in their several classes. The densely populated counties of Lancaster and Middlesex show by far the greatest number of total re-committals, the former exhibiting a proportion of nearly 50 per cent. to all prisoners, while 47 per cent. of the re-committed prisoners were aggravated cases:—while in Middlesex the general proportions were somewhat more than 45 per cent., the aggravated cases bearing to the whole re-committals the ratio of 34·2 per cent. Oxford exhibits a general proportion of 35 re-committed to 100 prisoners, and in aggravated cases of 41·7 per cent.; an amount attributable, perhaps, in some measure, to the influence of a rich and juvenile population on female morals. Surrey (a metropolitan county) exhibits a proportion of 37·2 per cent. of re-committed prisoners to all prisoners, and about the same proportion of aggravated cases as Middlesex, viz., 34 per cent. In Northumberland (where the re-committed prisoners form little more than one-fourth (26·7) to all prisoners), the aggravated cases mounted as high as 43·3 per cent.; and in the adjoining colliery county of Durham, the proportion of re-committed prisoners amounted only to 23·6 per cent. to all prisoners, the aggravated cases being 33·1 per cent. In ten counties, viz., Notts, Essex, Bedford, Wilts, Berks, Norfolk, Bucks, Stafford, Somerset, and Dorset, where the general proportions were under 30 and above 25 per cent., the proportions of aggravated cases were as follows:—Somerset, 32·5; Bucks, 32·1; Norfolk, 28·6; Stafford, 27·2; Essex, 25·1; Bedford and Wilts, 19·9; Berks, 19·7; Notts, 15; and Dorset only 13·7 per cent.

In twelve counties, viz., Kent, Huntingdon, Cornwall, Durham, Hants, Cambridge, Worcester, Westmoreland, Herts, Warwick, Derby, and Hereford, the general proportions varied between 20 and 25 per cent., the proportion of aggravated re-committals being, in Durham,



33·1; Cambridge, 32·1; Herts, 30·8; Kent, 28·2; Cornwall, 27·3; Hants, 24; Derby, 17·3, and Warwick nearly the same; Huntingdon, 16·4; Worcester, 15·3; and Westmoreland, 12·8. Cumberland, where the proportion of re-committals to total offenders is comparatively low, exhibits a proportion of aggravated cases amounting to 26·6 per cent. In South Wales the general proportions of re-committals were 15·2 per cent to all prisoners, and 27·3 per cent. were aggravated re-committals; whereas in the Northern Division of the Principality, where the general proportions were 6·4 per cent., those prisoners thrice or upwards re-committed bore to the whole re-committed a minor proportion of 15 per cent.

From examination it is found that there are certain counties in which the proportion of re-committed females exceeds that of the males, while in certain others the opposite is the fact. Thus in Lancaster, Middlesex, Surrey, Oxford, Northumberland, Durham, York, Warwick, Monmouth, and Cornwall (which comprises nine-tenths of the trading, manufacturing, and mining industry of the country,) the female re-committals are higher than those of the males; whereas in the rural districts—for instance, in Bedford, Berks, Bucks, Cambridge, Cumberland, Dorset, Devon, Essex, Leicester, Lincoln, Norfolk, Rutland, Salop, Somerset, Suffolk, Sussex, Westmoreland, and Wilts, the crimes of the males prevail more or less over those of the females.

In South Wales the female re-committals are considerably higher than those of the males, whereas the opposite is the case in North Wales.

In Lancaster, Middlesex, and Surrey, where female crime attains its culminating point, the density of population conduces, doubtless, to a very high amount of convictions, arising from disorder, brawls, and drunkenness, incidental to prostitutes and other profligate females. In Northumberland, Durham, York, and Warwick, likewise (in all of which female labour is exercised in its most deteriorating form), the proportion of female over male re-commitments is most remarkable;—and whenever females are employed in masculine occupations, congregated together in large numbers, with opportunities for free intercourse with the other sex, female crime will prevail over that of the males,—though chiefly in offences of the lower class. Among the total male re-committals the following counties range successively:—Chester, Oxford, and Surrey, 33·8 per cent. each; Leicester, 33·4; York, 32·3; Suffolk, 32·1; Sussex, 31·9; Essex, 31·4; Notts, 30·1. Eight counties range between 30 and 25 per cent., in the general proportions, viz., Wilts, Norfolk, Berks, Bucks, Dorset, Stafford, Somerset, and Huntingdon; eleven counties, viz., Cambridge, Kent, Cornwall, Hants, Northumberland, Durham, Westmoreland, Worcester, Salop, Derby, and Herts, exhibit general proportions, varying between 25 and 20 per cent. to the total prisoners. In Hereford and Northampton the re-committals form a proportion of 19 per cent. to the total prisoners. In Lincoln, Devon, Gloucester, and Monmouth, the proportions vary from 17 to 14 per cent. The two lowest counties, as regards general proportions, are Cumberland and Rutland—both equal, viz., 12·8 per cent.; and the latter, as might be expected from its small population, exhibits a very large proportion of primary re-committals; but the smallest proportions in all England of the aggravated cases. In Wales,

the Southern Division nearly doubles in its general proportions the Northern Division.

As respects the proportions of the females, Cornwall (29·9), Somerset (29·8), Kent (27·7), and Cumberland (26·7) per cent. ranged between 35 and 25 per cent. in the general proportions. Thirteen counties, viz, Hereford, Warwick, Hants, Herts, Notts, Monmouth, Essex, Berks, Stafford, Leicester, Dorset, Gloucester, and Sussex, range in their general proportions between 25 and 20 per cent. The eight lowest counties are Bedford (14·9), Westmoreland (14·5), Rutland (13·3), Lincoln (12·4), Bucks (12·2), Salop (12·), Northampton (11·5), Huntingdon (10·2). In South Wales the proportions of the females prevail over those in North Wales in the proportion of 19·4 to 3·1 per cent. This disproportion as regards the females, may be attributed to the circumstance that in South Wales there is a great demand for mining, factory, and other labour, which calls forth the females from their proper sphere of domestic occupations.

### *Terms of Imprisonment before Trial.*

The following table exhibits, in six groups, the terms of imprisonment before trial of all prisoners (without reference to sex) in England and Wales, separately and conjointly, as well as the separate counties of each, together with the proportions per cent. which the several classes bear to the whole in each year of the quinquennial period, 1839—1843. And the accuracy of the deduction is proved by the fact, that the sum of the constituent parts amounts exactly to a hundred without a decimal.

The object of the table is to show the long imprisonment to which committed criminals are subjected, in many cases antecedently to the proof of their guilt or innocence; and it will appear that out of 24,473 prisoners, committed in 1839, throughout England and Wales, no less than 9,493, or 38·8 per cent. of the whole, were taken away from their families, and kept in gaol one month and upwards, before their cases were examined by the juries. As respects those imprisoned two months and upwards, before trial, there were 3,946, or 16·1 per cent.; and of those imprisoned three months and upwards, 881, or 3·6 per cent.; facts quite conclusive as to the necessity of more frequent judicial inquiries. The following table exhibits the proportions for each year of the quinquennial period:—

• Years.		Terms of Imprisonment before Trial.		
		Proportion per cent. of Prisoners One Month and upwards.	Proportion per cent. of Prisoners Two Months and upwards.	Proportion per cent. of Prisoners Three Months and upwards.
England and Wales.	1839 ....	38·8	16·1	3·6
	1840 ....	38·2	15·1	4·1
	1841 ....	40·4	15·1	3·7
	1842 ....	39·7	15·7	4·4
	1843 ....	40·0	16·3	5·8
Annual Mean ....		39·4	15·6	4·3



Thus showing an increase during the quinquennial period of + 3·2 per cent. of those confined one month and upwards; of + 1·2 per cent. of prisoners confined two months and upwards; and + 60 per cent. of those confined three months and upwards before trial.

### *Prisoners under Summary Convictions.*

The positive numbers of prisoners summarily convicted, throughout England and Wales in 1839 and 1843, amounted to 57,455 and 73,196 respectively, showing a proportion to 100,000 of population of 371, and 448·1 respectively, and an increase of the latter over the former year, amounting to 20·8 per cent. The numbers of males in the same years were 43,280 and 57,361; of females, 14,175 and 15,835, showing a proportion of 100,000 of male population of 572 and 719, of females, 179 and 189½, to a similar female population, with an increase in the former of about 25½ per cent., and of the females 5·9 per cent. during the quinquennial period. The great increase was in 1842, being about 10 per cent. from 1841. The increase continued in 1843, but at a considerably diminished ratio, being under 2½ per cent. on the preceding year. The great increase of 1842 was occasioned, in a great measure, by general distress; but in the following year that increase was checked, though not entirely, by a healthy reaction flowing out of returning prosperity.

In England only, the numbers in 1839 and 1843, were 56,715 and 72,090 respectively, showing a proportion of 388·5 and 468·1 to 100,000 of total population during the two years (1839–1843) respectively. The increase during the quinquennial period being 20·5 per cent. on the total, 25·4 per cent. on the male prisoners, and an increase of only 5·7 per cent. on the female prisoners.

The numbers for Wales were 740 in 1839 and 1,106 in 1843, showing a proportion of 83·1 and 118·5 to 100,000 of total population—the amount of increase during the five years being, among males, + 45·2, females, + 29·6, and totals, + 42·6; this increase being on continually ascending numbers.

The check which the lower class of crime received in the year 1843, will be more plainly seen by the following tabular arrangement:—

	Increase 1839–1843.			Increase or Decrease, 1841–1842.			Increase or Decrease, 1842–1843.		
	Males.	Females	Total	Males.	Females	Total.	Males.	Females	Total.
England & Wales	25·7	5·9	20·8	+ 13·5	– 1·0	+ 9·9	+ 3·3	– 0·6	+ 2·4
England only.....	25·4	5·7	20·5	+ 13·3	– 1·1	+ 9·8	+ 3·1	– 0·7	+ 2·3
Wales only.....	45·2	29·6	42·6	+ 28·0	+ 8·7	+ 25·4	16·0	+ 11·6	+ 15·3

The Table of Summary Convictions, however, exhibits, in addition to the amount of crime, an extensive classification, which will now be investigated, in order that the whole results of these inquiries may be shown to the reader in an instructive and comprehensive form. The

following are the proportions which the different classes bear to the population in each of the five years:—

Classes of Crimes,		Proportions to 100,000 of Population.				
		1839.	1840.	1841.	1842.	1843.
Class I.	Military Prisoners .....	10·8	13·0	11·8	13·0	13·2
„ II.	Under the Game Laws .....	32·5	33·2	36·8	46·1	54·8
„ III.	„ Revenue Laws .....	3·2	3·2	3·5	4·4	4·7
„ IV.	„ Bastardy Laws.....	1·5	1·1	0·7	0·4	0·2
„ V.	„ Vagrant Act .....	111·5	124·1	116·8	129·6	135·4
„ VI.	„ Malicious Trespass Act	17·3	18·0	18·8	23·5	24·4
„ VII.	„ Larceny Act.....	17·9	18·9	16·0	19·7	11·1
„ VIII.	„ Metropolitan or Local Police Act .....	11·7	14·2	20·9	18·1	22·7
„ IX.	Assaults .....	47·5	56·0	59·0	63·3	64·8
„ X.	Want of Sureties .....	21·8	17·5	18·5	20·4	22·6
„ XI.	Reputed Thieves .....	28·7	35·2	33·2	30·7	26·7
„ XII.	All not before included .....	83·2	90·2	80·8	91·8	95·7

As respects the results, a large preponderance of Vagrant Act Convictions will be observed, chiefly the effect of domestic destitution and unsettled habits, caused in all probability by the more serious crimes of the natural supporters of families, aggravated also, it may be supposed, by the general distress throughout the country: next come the assaults, flowing chiefly out of intemperate habits; and then follow the reputed thieves. The Game Law Convictions have increased during the quinquennial period at a rate considerably greater than those of any other.

It will hence be seen that as respects military prisoners, Kent and Hants (in which are the chief barracks and depôts,) show the greatest increase. The Game-Law convictions have been considered apart in a table made for that special purpose, and to which the reader is referred. The offences against the revenue are exceedingly large in Lancaster, Northumberland, Surrey, and Middlesex. which show increments of 100, 75, 48, and 29, respectively. The offences against the Bastardy Laws are chiefly confined to males, and are decidedly on the decrease in England, but on the increase in Wales. The numbers in the counties are too low to admit of any fair proportional deduction. Vagrancy has been decidedly on the increase, particularly in Kent, where it rose to 240 per cent. in the five years. In Leicester the increase was 104 per cent., in Lancaster 78 per cent., and in Essex 63 per cent. In Wales the increase amounted to 111 per cent. The offences under the Malicious Trespass Act increased largely in Surrey, Somerset, and Leicester, which exhibit respectively increments of 217,  $146\frac{1}{2}$ , and 145 per cent. in the five years. Larcenies have on the whole decreased



in England  $63\frac{1}{2}$  per cent., while they have increased in Wales 104 per cent. during the five years. Offences against Police Acts are not noticed in these remarks, because they have a partial application in the several counties, accordingly as they have or have not numerous large towns: the increase in England during the quinquennial period amounted to 101 per cent. Assaults have increased in Leicester and Essex at the rate of 104 and 59 per cent. respectively, in Middlesex 38 per cent., in Lancaster 37, and in Somerset 36 per cent.: in England and Wales the increases have been 37 and 43 per cent. respectively. Imprisonments for want of sureties increased considerably in Kent, viz.,  $112\frac{1}{2}$  per cent., in Leicester to 92 per cent., in Northumberland  $87\frac{1}{2}$ , and in Essex a decrease of 80 per cent. In Wales they increased at the rate of  $66\frac{1}{2}$  per cent. during the quinquennial period. In the convictions of Reputed Thieves there has upon the whole been a decrease; but Somerset exhibits a lamentable increase of  $145\frac{1}{2}$  per cent. The miscellaneous convictions need no remark, as the nature of the offences cannot be identified. Other and equally interesting remarks might be made after a patient investigation of the offences committed in the other counties of England and Wales.

These observations are concluded by an exhibition of the proportions which the total female offenders bore to the total males in the following classes, during the years 1839, 1842, and 1843:

Classes of Crimes.		1839.	1842.	1843.
Class I.	Revenue Offences....	7.0 to 100 males	10.6 to 100 males	11.5 to 100 males
„	II. Bastardy .....	5.1 „	1.6 „	5.0 „
„	III. Vagrancy .....	65.0 „	47.6 „	45.6 „
„	IV. Malicious Trespasses	25.5 „	27.4 „	24.3 „
„	V. Larcenies .....	21.2 „	16.3 „	13.7 „
„	VI. Offences under Po- lice Acts .....	71.6 „	48.3 „	40.0 „
„	VII. Assaults .....	17.6 „	17.7 „	16.6 „
„	VIII. Imprisoned for want of Sureties }	25.6 „	18.6 „	22.0 „
„	IX. Reputed Thieves ....	18.6 „	16.3 „	16.3 „

As respects, however, the increase or decrease in the above counties, in Notts there was a total increase of long imprisonments before trial—viz., of those confined one month and upwards, 8.8 per cent.; of those confined two months and upwards, 50.9 per cent.; and of those confined three months and upwards, 251.5 per cent. In Bucks there was a decrease of prisoners confined two months and upwards before trial, of 5. per cent., and of those confined three months and upwards an increase of 72.5 per cent. In Lincoln, the prisoners confined two months and upwards, increased at the rate of 14.5 per cent.; and those confined three months and upwards, at the rate of 64.6 per cent. In York, there has been a decided decrease of 17.9 per cent. in the imprisonments for one month and upwards; of 43.1 per cent. in those of two

months and upwards; and an increase of 1·3 per cent. in prisoners confined upwards of three months before trial.

TABLE showing the Terms of Imprisonment of the Total Number of Prisoners before Trial in England and Wales, together with the Proportions (per cent.) which the several Classes bear to the whole, in each of the Five Years 1839, 1840, 1841, 1842, and 1843.

Locality and Years.		1.—TERMS OF IMPRISONMENT BEFORE TRIAL.					
		Under 14 Days.		14 Days and under 1 Month.		1 Month and under 2 Months.	
		Number of Prisoners.	Proportion per Cent. to Total Imprisoned.	Number of Prisoners.	Proportion per Cent. to Total Imprisoned.	Number of Prisoners.	Proportion per Cent. to Total Imprisoned.
England and Wales.	1839 ...	9,025	37·6	5,775	23·6	5,547	22·7
	1840....	9,597	36·4	6,703	25·4	6,090	23·1
	1841....	8,600	34·7	6,175	24·9	6,286	25·3
	1842....	9,985	34·8	7,313	25·5	6,871	23·9
	1843....	9,672	35·3	6,740	24·7	6,497	23·7
		2 Months and under 3 Months.		3 Months and under 6 Months.		6 Months and upwards.	
England and Wales.	1839....	3,065	12·5	756	3·1	125	0·51
	1840....	2,895	11·0	915	3·5	151	0·57
	1841....	2,821	11·4	791	3·2	120	0·48
	1842....	3,239	11·3	1,052	3·7	223	0·78
	1843....	2,880	10·6	1,247	4·5	328	1·2

Terms of Imprisonment after Trial.

The object of the next table is to show the various terms, differing from under fourteen days to three years and upwards, during which prisoners have been confined, in compliance with the sentences passed by the juries, at Assizes and Sessions in England and Wales, both separately and conjointly, arranged in twelve groups, which with a view to conciseness, are now re-arranged in four groups, showing the proportions in each year, and the increase and decrease in the quinquennial period.

In England and Wales, the following are the proportions from which the increase and decrease are calculated.

Locality and Years.		Convicted Prisoners confined.							
		Under 1 Month.		Between 1 and 3 Months.		Between 3 Months and 1 Year.		Above 1 Year.	
England and Wales.	1839 ...								
	1840 ...	2,190	15·7	3,569	25·5	6,675	47·7	1,551	11·1
	1841 ...	2,147	13·8	3,956	25·4	7,411	47·5	2,073	13·3
	1842 ...	2,248	14·3	4,265	27·0	7,627	48·4	1,617	10·3
	1843 ...	2,319	12·7	4,942	27·0	8,908	48·7	2,104	11·5
England and Wales.	1843 ...	2,179	12·6	4,771	27·6	8,359	48·4	1,939	11·2



From these proportions are deduced a decrease of 24· per cent. of convicted prisoners confined under one month; an increase of 8·3 per cent. of those between one and three months; an increase of 1·5 per cent. of those between three months and one year; and a slight increase of 1·3 per cent. of those above one year, between the extreme years of the quinquennial period.

TABLE showing the Terms of Imprisonment of the Total Number of Prisoners after Trial in England and Wales, together with the Proportions (per cent.) which the several Classes bear to the whole in each of the Five Years 1839, 1840, 1841, 1842, and 1843.

Locality and Years.		2.—TERMS OF IMPRISONMENT AFTER TRIAL.					
		Under 14 days.		14 Days and under 1 Month.		1 Month and under 2 Months.	
		Number of Prisoners.	Proportion per cent. to Total Convicted.	Number of Prisoners.	Proportion per cent. to Total Convicted.	Number of Prisoners.	Proportion per cent. to Total Convicted.
England and Wales.	1839....	1,363	9·8	827	5·9	2,187	15·6
	1840....	1,020	6·6	1,127	7·2	2,356	15·1
	1841....	777	4·9	1,064	6·7	2,486	15·8
	1842....	838	4·6	1,141	6·2	2,776	15·2
	1843....	824	4·8	1,103	6·4	2,706	15·7
		2 Months and under 3 Months.		3 Months and under 6 Months.		6 Months and under 1 Year.	
England and Wales.	1839....	1,382	9·9	3,720	26·6	2,955	21·1
	1840....	1,600	10·3	4,010	25·7	3,401	21·8
	1841....	1,779	11·3	4,262	27·0	3,365	21·4
	1842....	2,166	11·8	4,890	26·7	4,018	22·0
	1843....	2,065	12·0	4,648	26·9	3,711	21·5
		1 Year and under 2 Years.		2 Years and under 3 Years.		3 Years and upwards.	
England and Wales.	1839....	1,329	9·5	201	1·4	21	0·15
	1840....	1,680	10·8	338	2·2	55	0·35
	1841....	1,388	8·8	219	1·4	9	0·06
	1842....	1,886	10·3	205	1·1	10	0·05
	1843....	1,742	10·1	189	1·0	4	0·02
		Unlimited Terms of Imprisonment.		Whipped, Fined, or Discharged on Sureties.		Sentences Deferred,	
England and Wales.	1839....	....	....	....	....	....	....
	1840....	....	....	....	....	....	....
	1841....	1	0·006	407	2·6	4	0·03
	1842....	3	0·02	340	1·9	11	0·06
	1843....	4	0·02	252	1·6	11	0·06

Terms of Imprisonment under Summary Convictions.

The following table exhibits, in ten groups, all prisoners summarily convicted, without reference to sex, in England and Wales, separately and conjointly, with the proportions per cent. which the several classes bear to the whole in each year of the quinquennial period. The deserters awaiting a route are deducted in this table, so that the totals agree with thos in Table II., whiche gives a specification of the summary convictions themselves. As respects England and Wales, the imprisonments under three months form a proportion of 87· per cent. in 1839, and of 89·2 per cent. in 1843. These proportions, however, will be best seen by the aid of tabular arrangement as follows:—

Locality and Years.		Under 1 Month.	Between 1 and 3 Months.	Between 3 Months and 1 Year.	Above 1 Year.
England and Wales.	1839....	41·3	45·7	12·6	0·44
	1840....	41·5	45·4	12·3	0·75
	1841....	44·3	44·4	10·8	0·56
	1842....	47·8	41·6	9·9	0·55
	1843....	47·1	42·1	10·1	0·51
Annual Mean ....		44·4	43·8	11·1	0·56

These proportions exhibit an increase during the quinquennial period of 14·2 per cent. of those confined under one month ; a decrease of 8·6 per cent. of prisoners confined between one and three months ; a decrease of 24·5 per cent. of prisoners confined between three months and one year ; and an increase of 17·4 per cent. of those confined above one year. It will be curious also to notice the effect of the aggravation of crime in 1842 over 1841 ; the increase in 1842 being 7·9 per cent. of those confined under one month, and a decrease of 6·7 per cent. of prisoners confined between one and three months ; a decrease of 9·2 per cent. of prisoners confined between three months and one year, and a decrease also of 2·3 per cent. of those confined above one year.

TABLE showing the Terms of Imprisonment of the Total Number of Prisoners under Summary Convictions in England and Wales, together with the Proportions (per cent.) which the several Classes bear to the whole, in each of the Five Years 1839, 1840, 1841, 1842, and 1843.

Locality and Years.		3.—TERMS OF IMPRISONMENT UNDER SUMMARY CONVICTIONS.			
		Under 14 Days.		14 Days and under 1 Month.	
		Number of Prisoners.	Proportion per cent. to Total Convicted.	Number of Prisoners.	Proportion per cent. to Total Convicted.
England and Wales.	1839 .....	10,452	18·2	13,259	23·1
	1840 .....	11,879	18·6	14,661	22·9
	1841 .....	13,074	20·7	14,918	23·6
	1842 .....	15,888	22·5	17,789	25·2
	1843 .....	16,058	21·9	18,431	25·2



Locality and Years.		3.—TERMS OF IMPRISONMENT UNDER SUMMARY CONVICTIONS.— <i>continued.</i>			
		1 Month and under 2 Months.		2 Months and under 3 Months.	
		Number of Prisoners.	Proportion per cent. to Total Convicted.	Number of Prisoners.	Proportion per cent. to Total Convicted.
England and Wales.	1839 .....	19,607	34·1	6,666	11·6
	1840 .....	21,787	34·1	7,280	11·4
	1841 .....	21,111	33·4	6,953	11·0
	1842 .....	21,691	30·8	7,649	10·9
	1843 .....	22,959	31·4	7,862	10·7
		3 Months and under 6 Months.		6 Months and under 1 Year.	
England and Wales.	1839 .....	6,457	11·3	764	1·3
	1840 .....	7,185	11·2	707	1·1
	1841 .....	6,103	9·6	713	1·1
	1842 .....	6,165	8·7	796	1·1
	1843 .....	6,452	8·8	937	1·3
		1 Year and under 2 Years.		2 Years and upwards.	
England and Wales.	1839 .....	181	0·31	3	0·01
	1840 .....	148	0·23	3	0·01
	1841 .....	128	0·20	1	0·002
	1842 .....	169	0·25	8	0·01
	1843 .....	173	0·24	7	0·01
		Unlimited Terms of Imprisonment.		Whipped, Fined, or Discharged on Sureties.	
England and Wales.	1839 .....	66	0·11	....	....
	1840 .....	329	0·51	....	....
	1841 .....	224	0·35	71	0·11
	1842 .....	208	0·30	144	0·20
	1843 .....	194	0·27	123	0·17

### *Transports and Terms of Transportation.*

The accompanying table exhibits, in six groups, the various terms of transportation in England and Wales, separately and conjointly, in each year of the quinquennial period, together with the proportion per cent. which each group bears to the total transports as well as to the total convicted at assizes and sessions, and showing also the proportion which the total transports bear to the total convicted, as well as to 100,000 of total population, with the increase or decrease respectively.

In England and Wales the total transports in 1839 were 3,728; those in 1843, 4,166; showing proportions respectively of 21 and 19·4 per cent. to the total convicts, thus exhibiting a decrease of 8·3 per cent.; but as compared with the population generally an increase of 6 per cent. Of these transports, the following were the proportions as compared with the whole of those sentenced to an exile of less than fourteen years:—

Years.				Years.			
1839	....	2,960	.... 79·4	} Increase or Decrease {	1839-40	.....	- 3·9
1840	....	3,069	.... 76·4		1840-41	.....	- 0·3
1841	....	2,887	.... 76·2		1841-42	.....	- 0·2
1842	....	3,216	.... 76·0		1842-43	.....	+ 1·9
1843	....	3,227	.... 77·5		1839-43	.....	- 2·5

Of the transportations for fifteen years and upwards, exclusively of those for life (which are exhibited by themselves in the table), the following were the proportions as compared with the total transports:—

Years.				Years.			
1839	....	521	.... 14·0	} Increase or Decrease {	1839-40	.....	- 28·2
1840	....	438	.... 10·9		1840-41	.....	+ 8·7
1841	....	449	.... 11·9		1841-42	.....	+ 17·5
1842	....	589	.... 13·9		1842-43	.....	- 14·7
1843	....	506	.... 12·1		1839-43	.....	- 15·1

TABLE shewing the various terms for which the Total Number of Prisoners were sentenced to Transportation in England and Wales, in each of the Five Years 1839, 1840, 1841, 1842, and 1843, together with the Proportions (per cent.) which the several Classes bear to the Total Transports, and the Total Convicted at Assizes and Sessions; likewise the Proportion which the Total Transports bear to 100,000 of the Total Population, and the Increase or Decrease between the extreme Years of the above Quinquennial Period.

Locality and Years.		SENTENCES OF TRANSPORTATION.					
		7 Years and under 10 Years.			10 Years and under 14 Years.		
		Number of Prisoners.	Proportion per cent. to Total Transports.	Proportion per cent. to Total Convicted.	Number of Prisoners.	Proportion per cent. to Total Transports.	Proportion per cent. to Total Convicted.
England and Wales.	1839....	1,880	50·4	10·6	1,080	29·	6·1
	1840....	1,911	47·6	9·7	1,158	28·8	5·9
	1841....	1,693	44·7	8·7	1,194	31·5	6·1
	1842....	1,841	43·5	8·2	1,375	32·5	6·1
	1843....	1,841	44·2	8·6	1,386	33·3	6·5
		14 Years and under 15 Years.			15 Years and under 21 Years.		
England and Wales.	1829....	....	....	....	504	13·5	2·8
	1830....	246	6·1	1·3	421	10·5	2·2
	1831....	243	6·4	1·2	438	11·6	2·2
	1832....	204	4·8	0·91	553	13·1	2·5
	1833....	154	3·7	0·72	475	11·4	2·2
		21 Years and upwards.			For Life.		
England and Wales.	1839....	17	0·46	0·1	247	6·6	1·4
	1840....	17	0·42	0·08	264	6·6	1·3
	1841....	11	0·29	0·06	209	5·5	1·1
	1842....	36	0·85	0·16	220	5·2	0·97
	1843....	31	0·74	0·14	279	6·7	1·3



Locality and Years.		SENTENCES OF TRANSPORTATION.— <i>continued.</i>			
		Totals of Transports.			Increase or Decrease.
		Number of Prisoners.	Proportion per cent. to Total Convicted.	Proportion to 100,000 of Total Population.	Compared with Total Convicted.      Compared with Total Population.
England and Wales.	1839....	3,728	21·0	24	- 8·3      + 6·0
	1840....	4,017	20·5	26	
	1841....	3,788	19·4	24	
	1842....	4,229	18·8	26	
	1843....	4,166	19·4	25	

### Game Law Convictions.

With respect to the amount, proportions, and increase of Game-Law convictions, as exhibited in the following table, the numbers of prisoners summarily convicted in 1839 and 1843 respectively in England and Wales were 2,462 and 4,348, showing proportions in the respective years as compared with all summary convictions of 5·69 and 7·58 per cent., but, as respects the population, of 32·5 and 54·5. The increase of these convictions from year to year, and during the quinquennial period, was as follows:—

In 1840 from 1839 .....	2·1 increase.
1841 „ 1840 .....	11·0 „
1842 „ 1841 .....	25·2 „
1843 „ 1842 .....	18·2 „
1839 „ 1843 .....	67·4 „

A comparison of the different English counties, also, presents many interesting and highly important statements. The positive number of summary Game-Law convictions is greater, on the average of the five years, in Essex, Hants, Norfolk, Notts, Stafford, Suffolk, Surrey, Wilts, and York, than in any other English counties. This, however, proves nothing; but when a comparison is made between the Game-Law convictions of particular counties with all summary convictions, and in addition to this there be taken into consideration the calculated increase of the population, then correct and important inferences may be safely deduced. Thus, in Bedford the increase was 141·1 per cent, while in Berks and Bucks it amounted to 28½ and 95 per cent. respectively. In Chester, where the augmentation has been constantly progressive, the rate has reached 80½ per cent.; and Cambridge shows an increase of 85½ per cent. during the period. In Cornwall, Cumberland, Middlesex, and Monmouth, these crimes furnish no safe ground for calculation, as the numbers were very low; but in Devon these crimes increased at the rate of 134 per cent.; and in Durham (a colliery, under-ground working poor population) the increase has been 247 per cent. The increase of these convictions has been nearly equal in Essex and Oxford, viz., 124 per cent.; and the same remark applies to Huntingdon, Norfolk, and York, in all of which the increase during the period has been at the rate of about 150 per

cent., while in Lancaster the rate was 165 per cent. In Gloucester these offences doubled in the five years, in Lincoln nearly so, in Surrey they increased  $115\frac{1}{2}$  per cent., and in Rutland 200 per cent. In nine counties, viz., Berks, Hants, Herts, Kent, Leicester, Notts, Suffolk, Sussex, and Worcester, the increase was less than 50 per cent., the least being in Hants and Notts, which were at the rate of 13 and 11 per cent. respectively. In two counties only was there any decrease—in Northumberland of  $44\frac{1}{2}$  per cent. and in Somerset of 17 per cent.

The principal facts, however, respecting the increase or decrease of Game Law convictions between the several years of the quinquennial period, as well as between the extreme years, will be seen more clearly in the following table, which comprises twenty counties more particularly interesting as regards these convictions.

Counties.	Increase or Decrease per Cent.				
	1839-40.	1840-41.	1841-42.	1842-43.	1839-43.
Bedford.....	- 3·3	+ 29·7	+ 7·6	+ 78·6	+ 141·1
Berks .....	- 14·5	+ 4·2	+ 26·5	+ 11·7	+ 28·6
Bucks .....	+ 10·6	+ 25·5	+ 6·5	+ 32·0	+ 95·2
Cambridge .....	- 89·3	+ 149·8	+ 32·3	+ 6·3	+ 85·6
Chester.....	+ 42·5	+ 5·1	+ 19·5	+ 10·0	+ 80·6
Durham .....	+ 60·8	- 11·9	+ 53·8	+ 57·2	+ 247·1
Essex .....	+ 28·4	- 1·7	+ 24·3	+ 42·6	+ 123·8
Gloucester .....	- 4·5	+ 15·1	+ 56·0	+ 7·7	+ 102·3
Lancaster .....	+ 41·5	+ 12·5	+ 28·1	+ 30·1	+ 165·3
Leicester .....	+ 24·7	+ 3·1	+ 34·3	- 21·4	+ 42·1
Norfolk.....	- 39·7	+ 13·7	+ 30·7	+ 20·5	+ 150·2
Oxford.....	+ 20·1	+ 39·1	+ 12·6	+ 19·3	+ 124·3
Rutland .....	- 29·8	+ 27·4	+ 164·3	+ 15·6	+ 200·0
Salop .....	- 29·1	+ 137·6	+ 48·3	+ 4·3	+ 183·9
Stafford.....	- 11·3	+ 11·1	+ 37·9	+ 11·1	+ 52·9
Suffolk .....	+ 4·1	- 14·8	+ 2·3	+ 39·1	+ 28·9
Sussex .....	- 9·3	- 1·1	+ 17·7	+ 12·4	+ 19·9
Warwick .....	+ 10·4	- 50·0	+ 101·7	+ 10·4	+ 63·7
Wilts.....	- 11·5	+ 13·7	+ 34·6	+ 28·8	+ 76·8
York.....	+ 36·0	+ 3·2	+ 76·4	+ 0·2	+ 148·1

The above remarks apply only to the summary Game Law convictions; and, after all, the table by no means exhibits the entire amount of the crime and demoralization resulting from their operation, inasmuch as a very considerable number of persons summarily convicted for poaching get released at once by the payment of the fines inflicted, and thus are not entered at all in the gaol returns, as they never go to prison.

Independently of the summary convictions, there are the aggravated cases of prisoners convicted at assizes and sessions in each year, which have more than doubled on themselves, and nearly doubled the increase of summary convictions during the quinquennial period, 1839-1843. For instance, it is found on reference to the Criminal Tables of the Home Office for 1843 (p. 64), in Class VI. of the Comparative Table under the three heads "Deer-stealing and Feloniously resisting Deer-keepers," "Being out armed to take Game at night," &c., and



"Taking and destroying Fish in enclosed waters," (all of which are poaching offences), that in England and Wales the convictions in 1839 amounted to 75, and in 1843, to 175, thus showing an increase on the ordinary mode of reckoning, of 133 per cent., but in reality, when the progression of the male population is considered, of about 120 per cent. during the same period. Similarly, in England only, the real increase during the five years has been at the rate of 100 per cent. With respect to Wales, there were two acquittals and no convictions in 1839; but between 1840 and 1843 (both inclusive) the real increase amounted to 122 per cent. In Bucks, the convictions during the quinquennial period increased at the rate of 84 per cent. ; and in Chester, during the three years 1841-3 (there being no such convictions in the two previous years), at the rate of 267 per cent. In Gloucester the increase during the five years was at the rate of 560 per cent., and in Leicester of 75 per cent. In Stafford the average increase between 1839 and 1843 (for there were great fluctuations) rose as high as 405 per cent., and in York, the convictions increased at the rate of 47 per cent. in the five years. The numbers, however, of Game Law criminals of the higher class in each county are but small. In only five counties (Hants, Northumberland, Warwick, Wilts, and Worcester) was there any decrease. In Cornwall only were there no Game Law convictions of the higher class.

Independently, however, of all these considerations, and of the sentences of long imprisonments, and of transportation between seven and fourteen years, there are many other cases of national crime in the rural districts that cannot be entered in any description of Game Law tables, although directly growing out of the vicious habits engendered by poaching; and it is but reasonable to suppose that the classes Nos. 1 and 2 in the tables of the Home Office, *i. e.*, "Offences against the Person, and Offences against Property committed with Violence," receive considerable additions from prisoners, in the first place summarily convicted for mere acts of poaching in transgression of the present Game Laws; the vicious habits and utter recklessness induced by poaching, resulting in numerous instances of housebreaking, highway robbery, burglary, &c. It may be further stated, that in this class of offences there is a peculiarly demoralizing influence, inasmuch as they tend to destroy in the poor the power of distinguishing between the right and wrong both of persons and property. Rare also as capital executions have been in recent years, and only for murder of the most aggravated kind, there will yet be found, in 1843, an execution for the murder of a keeper, a crime directly arising from the unlawful pursuit of game.

It must be added, that these calculations are formed with reference to the male population only, because the offences are committed almost exclusively by males (there being only twenty females summarily convicted, and none at sessions and assizes during the whole five years). The crimes and punishment of the male parent, however, tend in all cases to the demoralization of whole families, the destruction of domestic self-respect, and in many instances to the breaking up of households, and the pauperism of the mother and children, who then may become offenders under the Vagrant Act or burdens on the Poor Laws, not to speak of the more serious offences likely to ensue from demoralized pauperism.

*State of Instruction of Prisoners.*

It is necessary to remark before entering into any detail, that it is exceedingly difficult to form any adequate conclusion respecting the state of education among criminal offenders;—and it is obvious, that any statement respecting the mere mechanical processes of reading and writing must form a very poor substitute for the information so much to be desired respecting the intellectual, moral, and religious training, to which the prisoners have, or ought to have been, subjected during their youth. It is to be hoped, indeed, that the amelioration of national education now actively in progress, under the sanction of the present Government, will soon exhibit its best effects in the diminution of crime: and it is to be hoped, the managers of prisons throughout England and Wales will pay an increased attention to the instruction of prisoners, (especially those of tender years,) in order that they may be deterred by sound instruction and moral information from hurrying forward in their sad career. Such details are exhibited, however, as could be easily furnished by the governors of the gaols throughout England and Wales; and both the higher and lower class of prisoners are divided into five sections, viz., those who can neither read nor write,—those who can read only,—those who can read or write badly,—those who can read and write well,—and those whose state of instruction could not be ascertained.

Among the prisoners in England and Wales there were, on the annual mean of the five years, 9,530 prisoners who could neither read nor write, forming a mean proportion of 33·9 of all the prisoners of the higher class; whereas among those confined under summary convictions the numbers on the annual mean were 26,924, or about 38 per cent. of all such prisoners. Of those who could read only the average mean annual number of prisoners at assizes and sessions amounted to 6,329, forming a mean proportion of 22·5 per cent. of all the prisoners; whereas among the lower class of prisoners the mean annual numbers were 13,932, or 20·6 per cent. of the whole. Of those who could read or write badly, the mean numbers were 9,598, or 34·3 per cent. among those at assizes and sessions; while of those under summary convictions the mean numbers and proportions were respectively 22,278 and 33·2 per cent. Of those who could read and write well, the mean annual numbers of the higher class of prisoners were 2,629, or 9· per cent., those of the lower class being 2,657, or somewhat more than 4 per cent. of all such prisoners. The prisoners whose state of instruction was not ascertained, forms a small and diminishing proportion to the whole in both classes.

A full investigation of the state of instruction among prisoners in all the counties of England would be highly interesting, when viewed in connexion with the proportions and increase or decrease of crime in the respective districts. The various counties of England are, therefore, arranged in a descending scale, showing the annual mean proportions of those who could neither read nor write, or else who could read only; these being classed together as persons in a state of almost total ignorance. The proportions of offences in the two classes are given, in order that the state of crime and want of instruction may stand in exact juxtaposition. The numbers making the density of population



in the different counties are given likewise, in order that a view may be furnished of the influence of scattered or dense population on crime.

Counties.	Annual Mean Proportion per cent. of Prisoners with little or no Instruction.		Counties.	Annual Mean Proportion per cent. of Prisoners with little or no Instruction.	
	Assizes and Sessions.	Summary Convictions.		Assizes and Sessions.	Summary Convictions.
Hereford .....	74·0	71·0	Oxford .....	57·8	59·8
Herts .....	70·8	72·0	Kent .....	57·1	59·6
Salop .....	72·2	70·9	Northampton .....	57·4	59·3
Essex .....	70·8	70·0	York .....	54·6	59·5
Wilts .....	67·0	74·9	Monmouth .....	58·3	61·4
Bedford .....	70·0	65·7	Lincoln .....	50·9	57·5
Cambridge .....	68·8	70·0	Durham .....	53·5	52·6
Gloucester .....	68·3	69·3	Notts .....	52·5	54·5
Worcester .....	70·3	70·7	Devon .....	57·9	48·3
Chester .....	66·3	63·9	Cornwall .....	47·9	57·5
Huntingdon .....	61·4	66·0	Surrey .....	48·2	55·6
Lancaster .....	62·6	65·7	Hants .....	51·2	52·5
Suffolk .....	58·2	67·8	Bucks .....	62·0	40·6
Derby .....	63·1	64·0	Sussex .....	47·7	54·6
Berks .....	55·6	67·2	Northumberland .....	43·9	55·5
Somerset .....	60·3	61·2	Middlesex .....	40·8	58·5
Dorset .....	57·3	63·3	Leicester .....	50·0	47·3
Norfolk .....	57·3	63·0	Westmoreland .....	42·6	50·6
Warwick .....	51·8	68·8			
Cumberland .....	61·3	56·9			
Rutland .....	59·3	59·4	North Wales .....	68·2	68·8
Stafford .....	59·3	61·1	South Wales .....	62·0	62·5

These proportionals are quite conclusive as to the defectiveness of education among the labouring classes in the various counties of England, and especially in those more strictly called agricultural counties, eleven of which head the above list in the scale of ignorance, viz., Hereford, Herts, Salop, Essex, Wilts, Bedford, Cambridge, Gloucester, Worcester, Chester (partially manufacturing), and Huntingdon. In all, however, the state of instruction among criminals is extremely low, for there are only five counties out of the whole forty in which less than 50 per cent. of all criminals in both classes were found to have little or no instruction. The second arrangement as respects crime is very different from the first, and it still remains a matter of speculation how far such an education (even if it can be so called), as is included in these returns, can be considered to have much influence upon the amount or mitigation of crime.

These proportions, however, decisive as they are respecting the mean annual amount of partial or total ignorance among the prisoners of both classes, is less interesting than the following statement respecting the increase or decrease of ignorance among criminals during the quinquennial period, and eight counties are selected in which the increase was greatest, and eight other counties in which there was either a total or partial decrease.

Counties.	Increase 1839-1843. Compared with 100,000 of the Population.		Counties.	Decrease, whole or partial, 1839-1843. Compared with 100,000 of the Population.	
	Assizes and Sessions.	Summary Convictions.		Assizes and Sessions.	Summary Convictions.
Derby .....	62·5	86·8	Notts.....	43·9	31·2
Cornwall .....	96·2	10·0	Berks.....	37·9	44·1
Warwick .....	79·8	23·6	Surrey .....	159·8	+38·1
Lancaster.....	10·5	8·6	Cumberland .....	148·0	+43·0
Worcester.....	27·9	32·9	Hants .....	102·7	+34·5
Stafford.....	20·7	34·9	Sussex .....	52·0	+ 2·1
Chester.....	15·3	34·8	Monmouth .....	26·0	+29·7
Middlesex.....	8·4	4·1	Wilts.....	12·8	+41·2

The above statements, though by no means so full as they might be, abundantly show that there is a near connexion between ignorance and crime, as well as that crime in many places co-exists with a considerable amount of what is termed plain education.

TABLE showing the State of Instruction of the Total Number of Prisoners for Trial at Assizes and Sessions, as well as those under Summary Convictions, in England and Wales, together with the Proportions which the several Classes bear to the whole, in each of the Five Years 1839, 1840, 1841, 1842, and 1843.

Locality and Years.		For Trial at Assizes and Sessions.									
		Can neither Read nor Write.		Can Read only.		Can Read or Write badly.		Can Read and Write well.		State of In- struction not ascertained.	
		Number of Prisoners.	Proportion per cent. to Total Accused.	Number of Prisoners.	Proportion per cent. to Total Accused.	Number of Prisoners.	Proportion per cent. to Total Accused.	Number of Prisoners.	Proportion per cent. to Total Accused.	Number of Prisoners.	Proportion per cent. to Total Accused.
England and Wales.	1839	8,565	34·1	5,391	21·5	8,592	35·0	2,612	8·7	17	0·7
	1840	9,314	34·2	6,364	23·4	8,941	32·9	2,589	9·5	..	..
	1841	9,517	34·4	6,346	22·9	9,169	33·1	2,578	9·3	8	0·29
	1842	10,765	34·1	7,340	23·2	10,731	34·0	2,747	8·7	..	..
	1843	9,491	32·8	6,204	21·5	10,556	36·5	2,621	9·0	10	0·34
Locality and Years.		Under Summary Conviction.									
		Can neither Read nor Write.		Can Read only.		Can Read or Write badly.		Can Read and Write well.		State of In- struction not ascertained.	
		Number of Prisoners.	Proportion per cent. to Total Sum- mary Convictions.	Number of Prisoners.	Proportion per cent. to Total Sum- mary Convictions.	Number of Prisoners.	Proportion per cent. to Total Sum- mary Convictions.	Number of Prisoners.	Proportion per cent. to Total Sum- mary Convictions.	Number of Prisoners.	Proportion per cent. to Total Sum- mary Convictions.
England and Wales.	1839	23,481	40·2	11,531	19·7	19,567	33·4	2,308	3·9	1,651	2·8
	1840	26,238	30·1	13,644	20·2	21,483	32·8	2,599	4·2	1,706	2·7
	1841	36,374	40·4	13,377	20·8	21,344	32·9	2,617	4·1	1,092	1·8
	1842	28,802	39·9	15,277	21·2	23,837	33·1	2,948	4·2	1,165	1·6
	1843	29,724	40·0	15,833	21·3	25,160	33·8	2,815	3·8	783	1·1



*On the Duration of Life of Sovereigns.* By WILLIAM A. GUY, M.B., Cantab.; Fellow of the Royal College of Physicians, Professor of Forensic Medicine, King's College, Physician to King's College Hospital, Honorary Secretary to the Statistical Society, &c.

[Read before the Statistical Society of London, 21st December, 1846.]

THE present communication forms the complement of my inquiries into the duration of life among the higher classes. The results obtained in a former Essay\*, though based on a small number of facts, rendered it probable that the members of Royal Houses, and Kings more especially, were shorter lived even than the aristocracy and gentry of England; the average ages of the four classes—Kings of England, Members of Royal Houses, Aristocracy, and Gentry—forming an ascending scale, represented by the round numbers 64, 69, 72, and 74.

In order to complete this interesting series of inquiries, and to establish the true duration of life of the highest class on the most secure basis, I have extracted from the volumes of the “*Art de Vérifier les Dates*,” an historical work of approved accuracy, the ages at death of all who, under whatever title, have borne rule as independent sovereigns, in any part of the world, and at any period of the world's history. I have also added the ages at death of sovereigns who have died since the publication of that work.

At present I propose to limit my inquiries to those who have borne rule within the Christian era; and in order to arrive at results admitting of comparison with those obtained in the case of the English Aristocracy, I have excluded all who have died by accident, violence, or poison, and all who have fallen in battle. The large majority are hereditary Sovereigns, but a small proportion consists of elective Sovereigns, and of such as attained to power by successful rebellion. Of the thirteen Emperors of Rome, for instance, who died natural deaths, one only was the son, and one the brother, of his predecessor, four were elected, six adopted, and one was an usurper. All these, however, have been admitted into the Tables, and as they will be found, on the average, to have attained a more advanced age than any group of hereditary monarchs†, it is obvious that their admission has a tendency to increase the value of life. On the other hand, elective Sovereigns who have attained to their elevated rank at very advanced periods of life, as the Popes, the Grand Masters of the Knights of St. John, and the Doges of Venice, have been excluded, as tending unduly to increase the average duration of life, when compared with such a class as the English Aristocracy. Where, then, the rule of admitting only hereditary Sovereigns has been departed from, it has obviously had the effect of giving an increased value to the life of the entire class, acting somewhat in the same way as new creations in the peerage and baronetage.

\* On the Duration of Life among the English Gentry, &c. Read January 19, 1846.

† The average ages of twenty-one English Kings, who died natural deaths, and attained the respective ages of 31 and upwards, 41 and upwards, and 51 and upwards, were 59·19, 60·45, and 64·12; but the average ages of thirteen Roman Emperors, calculated in the same manner, were respectively 65·54, 67·75, and 70·18.

A system of rigorous exclusion would certainly have lowered the value of life, at the same time that it would have diminished the number of facts from which the average is deduced.

As my object at present is to compare the class of Sovereigns with the classes examined in the two former Essays, I shall adopt, as nearly as possible the same arrangement, presenting, in the first place, the facts from which the averages are deduced, arranged by single years, and by intervals of five and ten years, and then proceeding to display the principal results, absolute and comparative, in tabular forms.

The following table exhibits the deaths occurring at every year of life, from 21 years of age upwards, in 1,440 Sovereigns, who have borne rule at different periods of the Christian era, and in different parts of the world :—

TABLE I.

Age.	No. of Deaths	Age.	No. of Deaths	Age.	No. of Deaths	Age.	No. of Deaths	Age.	No. of Deaths	Age.	No. of Deaths	Age.	No. of Deaths
21...10		32...14		43...24		54...19		65...34		76...19		87...3	98...0
22...9		33...21		44...22		55...32		66...41		77...15		88...2	99...0
23...11		34...16		45...35		56...43		67...22		78...17		89...1	100...1
24...14		35...17		46...23		57...28		68...26		79...5		90...4	101...1
25...16		36...14		47...21		58...33		69...29		80...26		91...0	...
26...17		37...19		48...30		59...31		70...33		81...6		92...2	...
27...10		38...22		49...31		60...54		71...22		82...10		93...1	...
28...20		39...20		50...25		61...30		72...18		83...5		94...0	...
29...12		40...32		51...25		62...33		73...19		84...8		95...2	...
30...17		41...9		52...34		63...33		74...19		85...1		96...0	...
31...20		42...14		53...39		64...32		75...12		86...4		97...1	...

The following tables give the numbers of deaths for periods of five and ten years, together with the per centage proportions for the same periods.

TABLE II.

Age.	No. of Deaths.	Per cent.	Age.	No. of Deaths.	Per cent.
21—25	60	4·16	61—65	162	11·25
26—30	76	5·28	66—70	151	10·49
31—35	88	6·11	71—75	90	6·25
36—40	107	7·43	76—80	82	5·70
41—45	104	7·22	81—85	30	2·08
46—50	130	9·03	86—90	14	0·97
51—55	149	10·35	91—95	5	0·35
56—60	189	13·12	96 & upwards	3	0·21

TABLE III.

Age.	No. of Deaths.	Per cent.	Age.	No. of Deaths.	Per cent.
21—30	136	9·44	61—70	313	21·74
31—40	195	13·54	71—80	172	11·95
41—50	234	16·25	81—90	44	3·05
51—60	338	23·47	91 & upwards	8	0·56



The low duration of life of Sovereigns will at once appear, if we compare the per centage proportion of deaths at the several decennial periods, as given in the preceding table, with similar results obtained in the case of the Aristocracy and Gentry of England. This comparison is made in the following table:—

TABLE IV.

Age.	Per centage of Deaths.		
	Sovereigns.	Aristocracy.	Gentry.
21—30 .....	9·44	6·63	10·67
31—40 .....	13·54	8·99	11·49
41—50 .....	16·25	13·66	11·65
51—60 .....	23·47	17·37	17·40
61—70 .....	21·74	20·99	21·92
71—80 .....	11·95	20·56	18·66
81—90 .....	3·05	10·43	7·01
91 and upwards	0·56	1·36	1·18

Before proceeding to a more exact comparison of the several classes it will be more in accordance with the order adopted in the former Essays to determine the duration of life among Sovereigns at different periods of time. This is exhibited in the following table, in which, in consequence of the small number of facts at our command at those early periods, the first ten centuries are thrown into two groups of five each. The table must be understood to give the average ages attained by Sovereigns *born* at the several specified periods.

TABLE V.

	No. of Deaths.	Average Age.
First five centuries .....	45	52·02
From 6th to 10th century, inclusive.....	105	51·55
11th century .....	59	54·02
12th.....	85	53·01
13th.....	117	51·25
14th.....	121	53·15
15th.....	176	53·56
16th.....	236	54·27
17th.....	303	55·64
18th.....	193	57·86

These figures show a different result from those contained in the former Essays; inasmuch as from the 13th to the 18th century the value of life among Sovereigns has continually improved, whereas among the English Aristocracy and Gentry it exhibited marked fluctuations, being a minimum in the 14th century, a maximum during the first half of the 16th century, and showing a progressive and marked decline till the beginning of the 18th century. As the two orders of facts do not admit of exact comparison, either as to place or time, no advantage would arise from entering more minutely into the differences which they display; but if we take the foregoing table by itself, it must be allowed to furnish satisfactory evidence of a progres-

sive and steady improvement in the value of life among those whose longevity is so bound up with the welfare of nations and communities.

But though the duration of life among the modern race of Sovereigns is so much more favourable than it was in more remote periods, it is still very low as compared with other classes of the community, a result already established on the narrow basis of the average age of the Kings of England, but which I now proceed to deduce from more ample and sufficient data.

As a preliminary to a comparison of the several classes it will be necessary to determine the average duration of life of Sovereigns who have attained or passed the ages of 21, 31, 41, and 51 respectively, The exact numbers will be seen in the following table :—

TABLE VI.

Age.	Average Age at Death.	Ducal and princely families.—(Casper.)
21 and upwards	54·22	56
26        "	55·56	57
31        "	57·16	59
41        "	60·90	63
51        "	64·89	67

It must be obvious at a glance that this is by no means a favourable result. The average age in every case is unusually low; which will appear more distinctly from the subjoined comparison.

TABLE VII.

Ages.	Sovereigns.	Kings of England.	Aristocracy.	Gentry.
21 and upwards	54·22	....	65·31	67·59
26        "	55·56	....	66·19	68·97
31        "	57·16	59·19	67·31	70·22
41        "	60·90	60·45	69·13	72·03
51        "	64·89	64·12	71·69	74·00

On comparing the average age attained by the larger class of Sovereigns with that of the Kings of England, the slight difference existing between them, especially at the more advanced ages, arrests our attention, and would seem to justify the use of comparatively small numbers of facts for the purpose of establishing statistical probabilities. It was on the strength of the averages obtained from that small number of facts, that I ventured, in a former Essay to place Kings at the bottom of the sanatory scale, and the figures in the above table have fully warranted that somewhat rash proceeding.

It may, perhaps, be objected that the several columns of the above table do not admit of exact comparison, inasmuch as neither the periods embraced nor the countries inhabited by the several classes are the same. The last three columns refer exclusively to England, and to the interval between the 12th and first half of the 18th centuries, whereas the first column comprises men who have borne rule in every quarter of the world, and at every period of the Christian era. The first objection is easily disposed of, by instituting a strict comparison, both as to time and number of facts, between the class of Sovereigns and that of the



Aristocracy or Gentry of England. It will suffice to make this comparison in the case of the Aristocracy. In a former Essay a table was given showing the duration of life among the English Aristocracy at different periods. The number of deaths, which at the earlier periods was confessedly too small to furnish satisfactory results, was as follows: 13th century, 7 deaths; 14th century, 9 deaths; 15th century, 23 deaths; 16th century, 152 deaths; making a total of 191 deaths. In order to the strict comparison of which I have just spoken, I selected from the deaths occurring among Sovereigns in the 13th century, the first seven deaths, in the 14th century the first nine deaths, in the 15th century the first twenty-three deaths, and in the 16th century the first hundred and fifty-two deaths, so as to obtain 191 deaths, in either case distributed in equal proportions over the same interval of time. The average results obtained were:

Sovereigns .....	53·78 years
English Aristocracy .....	67·95 „
<hr/>	
Difference in favour of the Aristocracy .....	14·17

The difference is here much too considerable to render any further comparisons necessary.

The second objection, that the two orders of facts are not strictly comparable, inasmuch as the class of Sovereigns comprises men who have borne rule in every country of the world, loses much of its force when we come to place side by side the averages obtained for the several countries. This is done in the following table, in which the average ages of Sovereigns who have borne rule in different countries, and at different periods, are given, together with the number of deaths upon which the average in the first column is based.

This table, which comprises the more important groups of Sovereigns and Sovereign Princes, furnishes a ready and conclusive answer to any objection founded on the different countries which have been admitted into the calculation. If we restrict our observation to the last column of the table, we shall see that the most favourable averages are obtained, in more than one instance, from Monarchs who do not belong to any of the races which at present bear rule in Europe. The Caliphs and Sultans of Aleppo, Damascus, and Egypt, and the Moors of Spain are among the most favourable averages, and rank with the Signors of Ferrara, the Dukes of Brunswick, the Counts of Maine, and the Emperors of Rome, while, on the other hand, the groups of least favourable averages comprise the Kings of Scotland, France, Denmark, Poland, and Wurtemberg, the Western Emperors, the Emperors of China and Japan, and the Sultans of Turkey.

It would appear, therefore, that the Sovereigns of remote countries, and different races, have contributed alike to increase and to diminish the average; and that there is no good reason to object to the wide field, both as to time and place, from which these facts have been gleaned.

If now we compare these several averages with the results already obtained, in the case of the Aristocracy and Gentry of England, we cannot avoid the conclusion, that Sovereigns, as a class, whatever the extent of their empire, or the degree of power they possess, are decidedly short-lived. The most favourable average is 70·50 years;

while the average for the English Aristocracy is 71·69, for the English Gentry 74·00, for the Learned Professions 73·62, for English Literature and Science 72·10, for the Army and Navy 71·99, and for the Professors of the Fine Arts 71·15.

TABLE VIII.

	No. of Deaths.	AGE.				
		21 and upwards.	26 and upwards.	31 and upwards.	41 and upwards.	51 and upwards.
Emperors of Rome .....	13	65·54	65·54	65·54	67·75	70·18
Eastern Emperors .....	28	53·39	55·73	60·68	63·35	66·82
Western Emperors .....	44	53·89	54·63	55·26	57·37	60·26
Caliphs .....	23	50·58	51·73	52·76	57·69	65·88
Caliphs and Sultans of Aleppo, Damascus, and Egypt .....	13	55·38	58·08	58·08	60·59	69·71
Sultans of Turkey .....	18	51·50	51·50	52·76	56·35	59·30
Emperors of China .....	64	46·26	48·15	50·86	56·95	60·28
„ Japan .....	16	48·06	51·57	53·23	55·91	60·62
Moors of Spain .....	21	62·76	62·76	62·76	67·11	68·12
Kings of England .....	21	59·19	59·19	59·19	60·45	64·12
„ Scotland .....	9	44·00	46·37	46·37	50·83	57·33
„ France .....	43	47·84	50·92	52·97	56·38	59·26
„ Spain .....	33	53·18	53·18	54·17	60·12	65·88
„ Portugal .....	24	56·33	56·33	56·33	60·90	63·63
Czars of Russia .....	18	50·17	53·44	53·44	59·33	61·90
Kings of Sweden .....	10	57·90	57·90	57·90	60·11	61·75
„ Denmark .....	16	55·81	55·81	55·81	56·86	60·82
„ Poland .....	12	59·17	59·17	59·17	59·17	60·73
„ Hungary .....	11	46·91	49·30	51·89	57·57	61·00
„ Bohemia .....	14	51·28	51·28	52·92	58·20	65·16
„ Bavaria .....	29	56·14	56·14	56·14	58·38	65·24
„ Saxony .....	18	54·50	54·50	57·94	59·73	63·83
Counts and Kings of Sicily .....	23	51·87	51·87	53·04	53·31	64·42
Counts and Dukes of Savoy .....	31	52·58	55·71	56·66	60·04	62·52
„ Wurtemberg .....	16	53·37	55·46	57·28	58·61	59·66
Dukes of Silesia .....	28	53·25	54·33	54·33	55·08	63·00
„ Brunswick .....	34	63·00	63·00	64·00	65·03	68·29
„ Holstein .....	41	56·58	58·33	59·10	62·79	65·21
„ Mecklenburg .....	19	57·68	57·68	57·68	60·23	63·14
„ Saxe Coburg, &c. ....	36	53·80	55·74	56·57	59·52	63·52
Margraves and Dukes of Baden .....	22	56·73	56·73	58·05	63·12	65·21
Landgraves and Dukes of Hesse Darmstadt, &c. ....	40	56·60	59·48	60·39	63·78	66·81
Counts and Princes of Anhalt .....	48	53·37	55·36	57·31	60·14	64·43
Counts of Maine .....	37	56·14	56·14	59·64	65·26	68·48
Dukes of Lorraine .....	15	53·36	55·71	60·25	60·25	64·55
Captains and Marquisses of Mantua .....	23	47·53	48·60	49·71	54·00	60·00
Signors of Ferrara .....	18	57·11	61·37	66·28	68·77	70·50



Whether then we form an average from a large number of facts, gleaned from a wide field of observation, or split up this single group into the smaller elements of which it consists, we arrive at the same conclusion, that Sovereigns, as a class, are among the shortest lived of human beings.

Since the foregoing observations were written, I have been favoured by my friend, Mr. Neison, with the following Life-Table for Sovereigns, calculated by means of the facts contained in Table I.

TABLE IX.  
*Expectation of Sovereigns.*

Ages.	Expectation.	Ages.	Expectation.	Ages.	Expectation.
20	34·3484	48	16·1216	75	6·0489
21	33·6318	49	15·5570	76	5·7636
22	32·9112	50	15·0040	77	5·5253
23	32·1896	51	14·4621	78	5·3359
24	31·4696	52	13·9306	79	5·1958
25	30·7538	53	13·4133	80	5·1156
26	30·0439	54	12·9139	81	5·0729
27	29·3455	55	12·4367	82	5·0249
28	28·6553	56	11·9865	83	4·9611
29	27·9729	57	11·5693	84	4·8777
30	27·2924	58	11·1798	85	4·7433
31	26·6285	59	10·8121	86	4·5818
32	25·9654	60	10·4602	87	4·4199
33	25·3085	61	10·1172	88	4·2606
34	24·6595	62	9·7742	89	4·0976
35	24·0198	63	9·4340	90	3·9194
36	23·3976	64	9·1008	91	3·7074
37	22·7710	65	8·7788	92	3·4545
38	22·1603	66	8·4738	93	3·1620
39	21·5549	67	8·1935	94	2·8451
40	20·9609	68	7·9341	95	2·5114
41	20·3445	69	7·6900	96	2·1819
42	19·7316	70	7·4529	97	1·8617
43	19·1157	71	7·2097	98	1·5645
44	18·5002	72	6·9413	99	1·2368
45	17·8892	73	6·6530	100	·9000
46	17·2869	74	6·3517	101	·5000
47	16·6981				

This table, as might be anticipated, fully confirms the averages just adduced : to what extent will appear from the following comparison.

TABLE X.

Age.	Sovereigns.	Peerage and Baronetage.	Gentry.	Professions.
20	34·3	38·5	37·3	....
30	27·3	30·9	31·2	33·9
40	20·9	24·4	24·9	26·0
50	15·0	17·9	18·4	18·9
60	10·5	12·6	12·8	12·8

The expectation of life of Sovereigns, therefore, falls short by from two to four years of that of the English Aristocracy, and this, as has been already shown, is extremely low.

In order to display the true position of Sovereigns in the scale of longevity, I have added another table, in which some of the most favourable, and some of the least favourable results hitherto obtained, for the age of 30, are placed side by side. Such of the figures as are not contained in the Essays on the Duration of Life among the Aristocracy and Gentry, will be found in Mr. Neison's "Contributions to Vital Statistics."

TABLE XI.

	Expectation of Life.
Agricultural Labourers (Benefit Societies) ....	40·6
Rural Districts ditto ....	38·4
Town Districts ditto ....	34·6
England (whole population) .....	34·1
Professions (chiefly Clergy) .....	33·9
Assured Lives (Amicable) .....	33·7
City Districts (Benefit Societies) .....	32·9
English Gentry .....	31·2
English Aristocracy .....	30·9
Clerks (Benefit Societies) .....	30·5
Liverpool (Benefit Societies) .....	30·1
Dundee (whole population) .....	29·1
Northampton Table (Price) .....	28·3
Sovereigns .....	27·3
Liverpool (whole population).....	27·0
Glasgow ditto .....	24·9

Before concluding this paper, it may be necessary to repeat, that the averages in Table VIII., as in the other tables, have been calculated from data obtained from the "Art de Vérifier les Dates." To have collated that work with approved histories of the several countries would have consumed more time than I had at my command, and the results would, probably, have differed very little from those which are here set forth.



*A Review of the Mines and Mining Industry of Belgium.* By RICHARD VALPY, Esq. *Founded on the Report of the Minister of Public Works to the King, dated Brussels, 1st June, 1842.*

[Read before the Statistical Section of the British Association, at Southampton, September 10th, 1846.]

THE most casual observer of the course of events can scarcely have failed to notice the growing desire, now more or less manifest in the people of all nations, to acquire authentic information respecting the various resources of their own and foreign countries; happily not with the view to kindle the lust of conquest, violence, or plunder, but to extend international commerce, and guide it into new channels, as a fruitful source of individual and national wealth, and a means of multiplying and cheapening the necessaries and comforts of life.

The wish to contribute, in however trifling a degree, to this desire for statistical knowledge, has been the object in the preparation of this paper.

As the country of which we treat is well known to be rich in mineral resources, and to possess an enterprising and industrious population for their development, we are sure that an exposition of the condition and progress of the mining industry of Belgium will not fail to be generally acceptable; but in this instance we are rather backward in producing the present observations, from the fear that they may not be deemed sufficiently complete to be of value or interest, but we have been induced to abstract from the report the principal facts, as they are the first authentic statistics of the kind that have been published, and we hope that their existence in the present paper, may prove to be advantageous should we have an opportunity to continue the subject at a future period. Coal is the most important and valuable of the mineral products of Belgium, and the extent of the supply gives to Belgium the second position in Europe, as a coal-producing country.

In the three principal coal countries, the ratio of the coal districts to the total area is—

In Great Britain .....	$\frac{1}{20}$ th.
„ Belgium .....	$\frac{1}{22}$ nd.
„ France .....	$\frac{1}{210}$ th.

the area of the coal districts being—

In Great Britain .....	2,930,000 acres.
„ Belgium .....	335,000 „
„ France .....	630,000 „

and the annual produce is calculated to amount—

In Great Britain (according to Mr. Porter*), to about	34,000,000 tons.
„ Belgium .....	4,500,000 „
„ France .....	3,783,000 „
And in the Germanic Union .....	3,000,000 „

Of the nine provinces of Belgium only four contain coal mines, which are separated into three divisions, the first being the province of Hainault, the second the provinces of Namur and Luxemburg, and the third the province of Liège.

\* *Statistical Journal*, Vol. vii., p. 284.

The area of the coal fields in these divisions is—

In the 1st division .....	189,312 acres.
„ 2nd division .....	41,607 „
„ 3rd division .....	104,362 „

Making for the kingdom an area of 335,281 acres.

In 1838 the total number of coal mines in the kingdom was 307, with 480 pits in work, and 172 constructing; 37,171 persons were employed; and the quantity of coal raised amounted to 3,201,584 tons.

For the three years 1836, 1837, and 1838, the following table exhibits the extent of the mining operations in each division of the coal mines:—

Divisions.	Number of Mines.	Number of Pits.						Number of Persons employed.			Quantities of Coal raised.		
		In Work.			Constructing								
		1836	1837	1838	1836	1837	1838	1836	1837	1838	1836	1837	1838
Hainault ....	154	251	283	318	39	77	123	20,880	23,011	25,241	Tons. 2,307,085	Tons. 2,425,152	Tons. 2,372,422
Namur .....	38	46	47	57	23	26	33	889	1,043	1,282	77,748	90,808	102,082
Liège .....	115	92	104	105	19	18	16	7,375	9,313	10,648	616,613	654,727	727,080
For the Kingdom .....	307	389	434	480	81	121	172	29,144	33,367	37,171	3,001,446	3,170,687	3,201,584

The total number of coal pits in 1829 was about 422, and in 1838 they numbered 652, an increase of 54 per cent. The increase in the number of pits was greatest in the first division of the mines, being as much as 60 per cent.

It is stated, that twenty or thirty years ago the number of pits to one mine was greater than is shewn by the above table, but in consequence of great improvements in the mining process, the pits are now made to yield larger quantities of coal than formerly.

In 1838 the total number of persons employed in the coal mines of the kingdom was 37,171; in 1829 only 29,717 persons were so employed; the difference in the period was therefore 8,454 persons, or 28 per cent.

In the division of the province of Hainault, 19,593 persons were employed in 1829, and 25,241 in 1838, which gives an increase of 5,648 persons, or 29 per cent. In the same division the increase on the average of 1837 and 1838 over that of 1834 and 1835, was 15 per cent.

From 1829 to 1834 there was a considerable falling off in the number of persons employed in the coal mines in the province of Liège—9,350 was the number employed in the former, and 6,540 in the latter of those years, making a decrease in five years of 2,810 persons, or 30 per cent. The number increased rapidly in 1837 and 1838, and amounted to 10,648 in 1838, or 63 per cent. over 1834. Still a comparison between 1838 and 1829 only exhibits an increase in the province of 1,298 persons, or 13 per cent. during the nine years.



We are unfortunately without the means of comparing the total quantities of coal raised in Belgium during a period of years. We can only state that the produce of the kingdom was 3,001,446 tons in 1836, and 3,201,584 tons in 1838; a difference of about 200,000 tons, or 7 per cent. in favour of 1838 over 1836.

As the province of Hainault produces about three-fourths of the total quantity of coal raised in Belgium, a comparison of the yield of coal in that division, may perhaps afford us some idea of the rate of increase in the quantity of coal brought to the surface throughout the kingdom.

The following table shows the quantity of coal produced in the Hainault division of the mines, in each year from 1829 to 1838:—

1829.	1830.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1,729,417	1,879,230	1,733,239	1,706,302	1,910,137	1,785,819	1,929,793	2,307,085	2,425,152	2,372,422

By this table we find that the increase in the quantity of coal raised in the nine years, from 1829 to 1838 was 643,005 tons, or 37 per cent.; and that the average production of the five years, from 1834 to 1838, exceeded that of the previous five years by 372,389 tons, or 21 per cent.

The province of Liège ranks next in importance of produce to the province of Hainault; and there the production increased about 30 per cent. in the nine years, and 25 per cent. on the average of the two quinquennial periods.

It is true that the progress here exhibited is not so remarkable as the development that has of late years taken place in the production of coal in other continental countries, but it must nevertheless be viewed as satisfactory, when we consider that coal-mining is of greater antiquity in Belgium, and consequently of more gradual extension. Furthermore, we lack information respecting early years, on which to found a more comprehensive comparison, and by which no doubt a rapid increase might be shown. But we have no doubt that the progress to the present period has been satisfactory, for as we have before stated, the present annual production is calculated at 4,500,000 tons, which would give an increase of 1,300,000 tons over 1838, or 40 per cent. in the eight years.

With regard to the average produce per mine, the figures in the first table enable us to calculate as follows:—

In 1838, for the 1st division .....	15,405 tons per mine
"      2nd      "      .....	2,686      "
"      3rd      "      .....	6,322      "
"      for the Kingdom.....	10,429      "

The average produce per pit, and to each person employed, in each of the divisions, is given in the next table for the three years 1836, 1837, and 1838.

DIVISIONS.	AVERAGE PRODUCE.					
	Per Pit.			To each Person Employed.		
	1836.	1837.	1838.	1836.	1837.	1838.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1. Province of Hainault	9,191	8,569	7,460	110	106	94
2. „ Namur ....	1,690	1,932	1,791	87	87	80
3. „ Liège .....	6,702	6,295	6,924	84	70	68
For the Kingdom...	7,716	7,306	6,670	103	95	86

The results here set forth will of course be influenced by various circumstances, such as the depth of the pits, the quantity of water present, the direction of the strata, and the tenacity of the mineral, &c.

It will be observed that, in general, the production per pit and to each person has diminished. There is an increase, however, by the pit, in the provinces of Liège and Namur.

Although these results may be looked upon as unfavourable for the few years specified in the above table, yet there is no doubt that the quantity raised to each person has increased of late years, and the decrease to each person in 1837 and 1838, may be partly occasioned by the rather sudden increase in those years of the persons employed, many of whom were perhaps engaged for the purpose of constructing new pits, and other works independent of raising coal.

In the province of Hainault there was an increase of  $24\frac{1}{2}$  per cent. in the production per individual employed in 1836, over 1829, but in 1838 the increase was reduced to  $6\frac{1}{2}$  per cent., still if we compare the average from 1834 to 1838 with the year 1829, we shall find that the increase was as much as 10 per cent.; and similar results will be observed for the province of Liège, where the increase in 1836 over 1829 amounted to 37 per cent.; it fell to 11 per cent. in 1838, but it was as high as 26 per cent. on the average of 1834 to 1838 over 1829. Respecting the value created by the raising of coal in Belgium, we are almost obliged to confine ourselves to the statement, that in 1838 it amounted to—

In the 1st division .....	£1,268,728
„ 2nd division.....	31,392
„ 3rd division.....	412,600

Making a total of ..... £1,712,720

and if we add to this sum the additional value, consequent on the transport of the coal from the place of production to the place of consumption, the total value created, would not be far short of three millions and a half sterling, or about double the first cost.

In the province of Liège the total value of the produce increased 190 per cent. from 1832 to 1838, while 60 per cent. was the increase on the production.



The average cost of production per ton in 1838, if calculated on the value as given above, would be—

In the 1st division .....	£0 10 8 $\frac{4}{10}$
„ 2nd division .....	0 6 1 $\frac{8}{10}$
„ 3rd division .....	0 11 4 $\frac{2}{10}$
For the Kingdom .....	£0 10 8 $\frac{4}{10}$

The selling price has risen considerably in each division of the mines. In the first division the increase was—

	In the Nine Years, 1829 to 1838.		On the Average of the Two Quinquennial Periods from 1829 to 1838.	
	1st Quality.	2nd Quality.	1st Quality.	2nd Quality.
District of Mons .....	30 per Cent.	55 per Cent.	$\frac{1}{2}$ per Cent.	8 per Cent.
„ of Charleroy ..	28 „	57 „	31 „	35 „

The average price per ton in 1838 was—

	1st quality.	2nd quality.	3rd quality.
District of Mons.....	17s. 3 $\frac{7}{10}$ d.	14s. 3d.	....
District of Charleroy ....	19s. 6d.	18s. 8d.	13s. 6 $\frac{9}{10}$ d.

In the province of Namur the average price per ton of coal of all qualities, at the pit's mouth was 6s. 4 $\frac{9}{10}$ d.

In the province of Liège the increase in the price was—

In the Nine Years, 1829 to 1838.		On the Average of the Two Quinquennial Periods from 1829 to 1838.	
1st Quality.	2nd Quality.	1st Quality.	2nd Quality.
23 per Cent.	39 per Cent.	18 per Cent.	25 per Cent.

The average price per ton in 1838 was—

1st quality, 23s. 11 $\frac{6}{10}$ d.	2nd quality, 16s. 6 $\frac{1}{2}$ d.
--	--------------------------------------

The wages of the persons employed, although subject to some depreciation in 1830, and a few subsequent years, advanced with the increased production and value of coal.

It appears that in the Hainault division of the mines, the average rate of the wages per day was—

	In 1830.	In 1838.	Increase in 1838.
In the district of Mons .....	20d.	22 $\frac{1}{2}$ d.	12 per cent.
„ of Charleroy ....	11 $\frac{1}{2}$ d.	17 $\frac{1}{2}$ d.	52 „

The per centage difference between the wages in the two districts of the province of Hainault in 1838 was 29 per cent. higher in the district of Mons.

The average rate of daily wages in the province of Namur in 1838 was 16 $\frac{1}{10}$ d.

And in the province of Liége, daily wages averaged—

In 1829.	In 1838.	Increase in 1838.
12 <sup>3</sup> / <sub>10</sub> d.	18 <sup>1</sup> / <sub>2</sub> d.	51 per cent.

Thus we find the following to have been the average rate of daily wages, paid to persons employed in raising coal, in each division of the mines, in 1838.

1st division, Province of Hainault.....	20d.
2nd    ,,           ,,        Namur .....	16 <sup>1</sup> / <sub>10</sub>
3rd    ,,           ,,        Liége .....	18 <sup>1</sup> / <sub>2</sub>
<hr/>	
Making the Average for the Kingdom .....	18 <sup>3</sup> / <sub>10</sub> d.

Great facilities exist in Belgium for the distribution of the coal from the mines. By means of rivers, canals, and good roads, the Hainault coal finds an easy and ready exit to the two Flanders, Holland, France, and to Brussels, and the other principal towns of the province.

The produce of the mines in Namur is chiefly consumed within that province.

The coal from the mines in the province of Liége is more than sufficient for the local consumption, and the Meuse affords the means of transport for the surplus, both to France and Holland, and is also one of the principal routes for the interior.

Belgium exports nearly one-fourth of the produce of her coal mines to foreign countries, we might almost say to France alone; for, although Holland ranks next to France as a market for Belgian coal, yet the quantities sent to Holland, and other foreign countries, are quite insignificant in comparison with the export to France.

The following short table of the exports of Belgian coal in each year, from 1835 to 1840, shows that France receives by far the largest part of the surplus coal of Belgium.

Years.	Total Quantities Exported.	Quantities Exported to France.
	Tons.	Tons.
1835	683,065	672,705
1836	759,686	747,878
1837	774,879	766,382
1838	761,574	752,632
1839	732,344	714,269
1840	765,442	705,356

The establishments for working the coal mines of Belgium may be considered as being in a state of transition, with regard to their constitution and management. Capital is now exerting its powerful influence, and societies of wealth and intelligence are gradually supplanting the ancient ownership, whether of individuals, or of poorer societies composed of the miners themselves, or of persons of like means in general.

In 1834, and subsequent years, coal-mining attracted the attention of capitalists, who formed joint-stock companies, called “ Sociétés



Anonymes" for prosecuting that branch of industry. Mines were purchased by these companies, various improvements were introduced in their management; and smelting, and other works, for the preparation of iron and the manufacture of machinery, were added to the establishments.

Of the 304 coal mines in Belgium in 1838, 221 remained the property of the old style of company called "Sociétés Civiles;" it being a rare occurrence for a mine of any consequence to belong to a private individual.

The following table exhibits the operations of these companies, respectively, in each year, from 1834 to 1838.

Divisions of the Mines.	Num- ber of Mines.	Pits in work and construction.					Tons of coal extracted.				
		1834	1835	1836	1837	1838	1834	1835	1836	1837	1838
" SOCIETES ANONYMES."											
1st. Hainault	68	74	83	127	182	233	782,667	863,271	1,114,707	1,169,320	1,105,387
2nd. Namur	2	5	4	9	8	15	6,186	7,070	4,419	8,720	3,177
3rd. Liège ..	13	13	13	17	20	23	94,819	110,871	103,095	109,666	153,724
The Kingdom	83	92	100	153	210	271	883,672	986,212	1,222,221	1,287,706	1,262,288
" SOCIETES CIVILES."											
1st. Hainault	86	109	112	163	178	208	1,003,151	1,061,521	1,192,377	1,225,821	1,267,035
2nd. Namur	36	54	53	60	65	73	90,957	71,995	73,329	82,088	98,905
3rd. Liège ..	102	86	87	95	102	108	421,801	479,995	509,294	545,061	573,356
The Kingdom	224	249	252	318	345	389	1,515,909	1,613,511	1,775,000	1,832,970	1,939,296

The progress, therefore, of the new companies, or the "Sociétés Anonymes," was much more rapid than that of the "Sociétés Civiles," as may be readily observed in the following table, which exhibits the per centage increase, in the number of pits and the production.

Divisions of the Mines.	In the number of the Pits.	Sociétés.	
		Anonymes.	Civiles.
1st. Hainault .....	Increase.	214 per cent.	90 per cent.
2nd. Namur .....	"	200 "	35 "
3rd. Liège.....	"	76 "	25 "
The Kingdom .....	Increase.	194 per cent.	56 per cent.

Divisions of the Mines.	In the Production.	Sociétés.	
		Anonymes.	Civiles.
1st. Hainault .....	Increase.	41 per cent.	26 per cent.
2nd. Namur .....	Decrease. Increase.	- 48 "	+ 8 "
3rd. Liège.....	Increase.	62 "	35 "
The Kingdom .....	Increase.	42 per cent.	27 per cent.

These results, although for a period of five years only, may be considered sufficient to point out what will be the probable progress of the respective societies.

The other mineral productions of Belgium that are worthy of notice, appear to be confined to iron and calamine; lead is also produced, but in very small quantities.

The provinces we have before mentioned as containing the coal are likewise those, in which the several Ores are found.

The number of places for extracting Ore, was as follow, in the three years, 1836, 1837, and 1838.

Divisions of the Mines.	Number of Places for extracting Ore, in work.								
	Subterraneous.			Open.			Total.		
	1836.	1837.	1838.	1836.	1837.	1838.	1836.	1837.	1838.
1. Province of Hainault....	118	215	14	3	4	1	121	219	15
2. Provinces of Namur } and Luxemburg..... }	833	817	489	228	164	80	1,061	981	569
3. Province of Liège.....	140	175	154	4	3	2	144	178	156
For the Kingdom .....	1,091	1,207	657	235	171	83	1,326	1,378	740

And the following were the number of persons employed, and the quantities of each kind of Ore extracted, in the same years.

Divisions of the Mines.	Number of Persons employed.			Quantities of Ore extracted.			Nature of Ore.
	1836.	1837.	1838.	1836.	1837.	1838.	
1. Province of Hainault..... }	524	927	206	Tons. 39,261	Tons. 72,867	Tons. 31,253	Iron
2. Provinces of Namur and Luxemburg.... }	3,213	3,143	1,687	519,404 528	514,064 206	227,495 341	Iron Lead
3. Province of Liège..... }	1,067	1,167	1,082	66,824 5 9,191	86,301 30 16,074	70,062 26 17,402	Iron Lead Calamine
For the Kingdom	4,804	5,237	2,975	625,489 533 9,191	673,232 236 16,074	328,810 367 17,402	Iron Lead Calamine

By far the greater proportion of the iron ore raised in Belgium is furnished by the second division of the mines, comprising the provinces of Namur and Luxemburg; next in the order of production is the province of Liège, and last comes the province of Hainault. Thus, when we turn from coal to iron, we find the provinces quite reversed in the order of production.

Namur and Luxemburg, also supply the principal part of what lead is produced.



Calamine appears as the produce solely of Liége.

It appears that the extraction and preparation of iron, was carried on with inconsiderate ardour in the years 1835, 1836, and 1837; the natural consequence of which was, that the supply greatly exceeded the demand, and in 1838, the operations of the iron works were seriously depressed. The preceding tables will show, that, in 1838, the places of extraction, the persons employed, and the production, were all reduced, in number and quantity, to nearly one-half of what they had been in the previous two years, 1836 and 1837; and extensive as the reduction then was, it did not reach its limit in 1838, but became more serious still in subsequent years.

In 1838, Belgium possessed the following number of establishments for preparing the several mineral productions:—

221 for iron.
8 „ copper.
7 „ zinc.
2 „ lead.
<hr/>
Total ..... 238

The number of furnaces in each of the producing provinces amounted in 1838, to—

PROVINCES.	Using Charcoal		Using Coke.		TOTAL.
	In Work.	Not in Work.	In Work.	Not in Work.	
Hainault .....	5	3	9	17	34
Namur .....	41	3	3	2	49
Luxemburg .....	27	7	—	—	34
Liége .....	5	1	8	8	22
For the Kingdom .....	78	14	20	27	139

We cannot glance at this table without observing how largely the furnaces using charcoal predominate over those which are worked with coal, especially in the provinces of Namur and Luxemburg.

Most of the establishments for working minerals in the province of Hainault are situated in the district of Charleroy. In that district eight furnaces, using coke, were constructed during the period from 1826 to 1835, and, with two furnaces using charcoal, consumed annually, 117,840 tons of washed ore, 144,354 tons of coal, and 4,778 tons of charcoal; and produced 28,478 tons of cast iron, which is in the ratio of one ton of metal to about 4 tons 3 cwt. of ore.

Three forges, on the English system, consuming annually 10,198 tons of coal, and producing 3,731 tons of bar and rod iron, were also established during the same period.

The total value of cast and wrought iron produced in the district of Charleroy, was estimated in 1834, at 281,800*l*.

In 1838, the number of furnaces in this district amounted to 32, of which 8 used charcoal, and 24 used coke; of these only 5 of the former, and 9 of the latter, were in work.

From inquiries made at the end of the year 1839, it was shown—

that, in the province of Hainault, the production of cast iron had risen to 43,690 tons, and of wrought iron to 24,550 tons; the value of these quantities is estimated, on the average, at 4*l.* 16*s.* a ton for cast iron, and 10*l.* a ton for wrought iron, which would give as the total value of

Cast iron .....	£216,000
Wrought.....	250,000
<hr/>	
Making a total of	£466,000

as the value of the produce of the iron works in the province of Hainault.

It will be seen by the last table how large a proportion of the furnaces, belong to the provinces of Namur and Luxemburg. It is calculated that the furnaces in those provinces could produce annually about 65,000 tons of cast iron. The declared production in 1841, by furnaces using charcoal, was—

In the province of Namur.....	17,734 tons.
„ of Luxemburg .....	5,420 „
<hr/>	
Total .....	23,154 tons.

The cast iron made in that part of the country is generally of superior quality, and the principal market for it is Liège.

In 1838 the province of Namur contained the following number of mineral works, viz.

	72 for preparing iron.
	8 „ copper.
	1 „ lead.
	<hr/>
Total .....	81

The province of Luxemburg in the same year, numbered 43 such works, all of which were for working iron. The preparation of iron and zinc principally engage the mineral works in the province of Liège. In 1838 it appears that there were

	52 establishments for iron.
7	„ zinc.
1	„ lead.
<hr/>	
Total .....	60

We have seen it stated in a number of the “Mining Journal,” that the consumption of iron in Belgium, amounted in the year 1844, to 120,000 tons, in England to 1,200,000 tons, in France to 480,000 tons, and in the Germanic Union to 300,000 in the same year.

The manufacture of zinc in the province of Liège appears to have met with an important development; the produce in 1838 quadrupled that of 1835, and doubled that of 1836.

The Belgian imports and exports of the several metals just referred to, consisted of the following quantities in each year, from 1835 to 1840,—



Metals.	1835.	1836.	1837.	1838.	1839.	1840.
<b>IMPORTS.</b>	<b>Tons.</b>	<b>Tons.</b>	<b>Tons.</b>	<b>Tons.</b>	<b>Tons.</b>	<b>Tons.</b>
Iron, cast of all kinds	1,910	3,720	9,651	5,210	1,930	510
„ wrought „	1,298	1,413	1,339	1,632	1,546	1,724
„ old and broken	1,758	4,652	3,388	1,677	1,307	394
Lead, in pigs .....	2,175	1,751	1,659	2,174	2,725	2,550
Zinc, raw .....	4	480	530	308	622	13
<b>EXPORTS.</b>						
Iron, cast of all kinds	5,234	7,079	6,521	5,813	7,052	10,250
„ wrought „	4,563	4,521	3,614	4,621	4,844	6,089
Zinc, raw and rolled..	1,607	1,220	1,625	2,616	3,305	3,069
Machinery, value ....£	159,592	120,364	130,932	245,444	112,496	160,172

This table shows that iron and zinc are the only metals of which Belgium produces more than is required for the home consumption. The quantities of the metals exported are comparatively small, yet the progress exhibited in the above years appears to warrant the expectation that iron and zinc will become, in future, a more important part of the export trade. Nails form a large portion of the wrought iron exported. France and Holland are the chief foreign markets for the iron, as well as the coal, of Belgium.

Before closing our paper, it may be interesting to devote a little attention to the number and nature of the accidents which have happened in the Belgian mines. The returns, for this branch of the subject, extend over 20 years, from 1821 to 1840. During that interval 1,352 accidents occurred, occasioning severe hurts to 882, and death to 1,710 work-people, and making together a total of 2,592 sufferers.

The following table exhibits the total number of accidents, with their nature and results, in each of the two decennial periods, and in the 20 years from 1821 to 1840.

Nature of Accidents.		Number of Accidents.			Results of Accidents.					
					Number of Persons Wounded.			Number of Persons Killed.		
		1821 to 1830.	1831 to 1840.	1821 to 1840.	1821 to 1830.	1831 to 1840.	1821 to 1840.	1821 to 1830.	1831 to 1840.	1821 to 1840.
Happening in the Pits.	In descending or ascending by cords or chains .....	107	119	226	24	26	50	115	146	261
	Ditto ditto by ladders	43	52	95	7	23	30	38	35	73
	From other causes .....	118	144	262	22	31	53	102	130	232
	Falling in of Materials ....	146	243	389	44	70	114	129	205	334
	Explosions of Fire-damp .....	50	80	130	215	257	472	198	307	505
	Inundations .....	16	13	29	16	....	16	64	104	168
	Blasting .....	35	40	75	35	44	79	14	17	31
	Not specified .....	34	112	146	10	58	68	34	72	106
Total .....		549	803	1,352	373	509	882	694	1,016	1,710

According to the frequency of their occurrence during the 20 years, the accidents will stand in the following order:—

	No.	Per Cent.
Falling in of material .....	389	or 28·8
Accidents in the pits, not specified .....	262	„ 19·4
In descending or ascending by cords or chains.....	226	„ 16·7
Accidents not otherwise specified .....	146	„ 10·8
Explosions of fire-damp .....	130	„ 9·7
In descending or ascending by ladders.....	95	„ 7·0
Blasting .....	75	„ 5·5
Inundations .....	29	„ 2·1
Total .....	1,352	100·0

The comparative results of the several kinds of accidents in the kingdom, on the average of the same periods, are shown in the next table.

Nature of Accidents.	1821 to 1830.			1830 to 1840.			1821 to 1840.		
	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Explosion of Fire-damp	57·6	28·5	38·7	50·5	30·2	37·0	53·5	29·5	37·7
Falling in of Material	11·8	15·6	16·2	13·8	20·2	18·0	12·9	19·5	17·3
Blasting .....	9·4	2·0	4·6	8·6	1·7	4·0	9·0	1·8	4·2
In descending or ascending by cords or chains .....	6·4	16·6	13·1	5·1	14·4	11·3	5·7	15·3	12·0
In the Pits, not specified	5·9	14·7	11·6	6·1	12·8	10·6	6·0	13·6	11·0
Inundations .....	4·3	9·2	7·5	.....	10·2	6·8	1·8	9·8	7·1
Causes not specified ....	2·7	4·9	4·1	11·4	7·1	8·5	7·7	6·2	6·7
In descending or ascending by ladders .....	1·9	5·5	4·2	4·5	3·4	3·8	3·4	4·3	4·0
	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

In what proportions these results occurred in the different divisions of the mines may be seen in the first table in the following page; by which it will be observed, that in the provinces of Hainault and Liège, the accidents caused by explosions were the most disastrous, amounting to 34½ per cent. of the total injuries and deaths in the former, and 43·8 per cent. in the latter province. Falling in of material, many of which accidents are consequent on the loosening effects of blasting, stands next, and in the provinces of Namur and Luxemburg, nearly one-half of the lives destroyed is owing to that cause. The ascent or descent of the pit, in buckets or otherwise, by cords or chains, forms the third principal cause of danger, occasioning nearly 20 per cent. of the deaths in the provinces of Namur and Luxemburg.



Nature of Accidents.	Provinces of Hainault.			Provinces of Namur and Luxemburg.			Province of Liège.		
	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Explosion of Fire-damp	55·5	24·1	64·5	10·0	1·6	4·3	54·6	38·0	43·8
Falling in of Material	10·5	20·3	37·0	56·9	45·2	48·9	12·4	16·6	15·1
Blasting .....	3·4	1·0	11·8	3·3	3·2	3·3	15·3	2·6	7·0
In descending or as- cending by cords or chains .....	5·9	12·3	10·2	6·7	19·4	15·2	5·3	15·3	13·9
In the Pits, not specified	4·3	13·1	10·2	13·3	12·9	13·0	7·3	14·2	11·8
Inundations .....	3·6	15·5	11·5	....	....	....	....	4·2	2·7
Causes not specified ....	11·6	6·9	5·5	6·7	14·5	12·0	3·6	4·7	4·3
In descending or as- cending by ladders }	5·2	6·8	6·3	3·3	3·2	3·3	1·5	1·4	1·4
	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

We must have been struck during the perusal of the figures relating to the several accidents, with the great difference in their numbers and ratio of mortality, in connexion with the two plans of ascent and descent, by cords and by ladders. Referring to the first table connected with the subject, we find that, on the average of the 20 years, from 1821 to 1840, the excess in the number of accidents from the use of cords, was no less than 138 per cent., and the mortality was higher by 13 per cent. This circumstance affords a proof of the utility of recording such events, for had we no such basis for observation, the mere occurrence of any serious accident from time to time, might produce no steps towards prevention, but the comparison of recorded facts, makes it evident to all, that one of two means used to attain the same end, is attended with more frequent and fatal accidents than the other, and in this instance measures have been taken, we believe, to mitigate and remedy the evil, by discouraging a practice proved to be so dangerous, and encouraging the use of inclined planes, and other safer means.

The average number of the persons employed in the mines in the several provinces, on the average of each of the two decennial periods, and in the 20 years, from 1821 to 1840, was

Provinces.	Average number of Persons employed.		
	1821 to 1830.	1831 to 1840.	1821 to 1840.
Hainault.....	16,000	20,500	18,250
Namur and Luxemburg....	1,880	2,680	2,280
Liège .....	8,100	8,320	8,210
The Kingdom .....	25,980	31,500	28,740

If we compare these numbers with those of the accidents and their results, we shall find the following per centage ratio, between the number and consequences of the accidents and the persons employed, on the average of the same periods.

Provinces.	1821 to 1830.				1831 to 1840.				1821 to 1840.			
	Accidents.	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.	Accidents.	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.	Accidents.	Persons Wounded.	Persons Killed.	Persons Wounded and Killed.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Hainault .....	1·5	0·7	2·1	2·8	2·2	1·6	2·6	4·2	3·8	2·4	4·8	7·2
Namur and Luxem- burg .....	1·5	0·5	1·3	1·8	1·9	0·7	1·5	2·2	3·5	1·3	2·7	4·0
Liège .....	3·4	3·1	4·2	7·3	3·6	1·9	5·2	7·1	7·0	5·0	9·4	14·4
The Kingdom .....	2·1	1·4	2·7	4·1	2·5	1·6	3·2	4·8	4·7	3·1	5·9	9·0

It will be perceived, that the accidents increased in number, and their consequences were more serious, in the second decennial period; but the greater development of mining operations, and the consequent employment of several new and inexperienced hands, added to the greater danger of inundation, falling in of material, and explosion of fire-damp, from the extension of the works in the mines, may partly account for the increase.

The Belgian Government, however, has exerted itself, with praise-worthy energy, to diminish the number of accidents, by establishing enactments for the careful execution of works in the mines; directing the particular attention of the engineers to the maintenance of efficient ventilation; encouraging the discovery of means for the greater prevention of fire-damp explosion; and in various other ways of precaution; and to alleviate the sufferings, consequent on such accidents, by favouring the establishment of benefit societies, and various other local charitable institutions for the assistance of the miners and their families.

However incomplete this short review may prove to be, and whatever fluctuations may have been noticed in some branches of the mining industry, sufficient facts have been brought forward, we trust, to confirm our views of the mineral wealth possessed by Belgium, and to lead us to hope that that wealth may receive, in future, an important development for the benefit of the native industry, and the commerce of foreign countries.



## MISCELLANEOUS.

STATE OF THE PUBLIC HEALTH IN THE LAST QUARTER OF  
THE YEAR 1846.

"THE Quarterly Returns are obtained from 115 Districts, sub-divided into 576 Sub-Districts. *Thirty-four* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,579,693 in 1841."

The time from harvest to Christmas, comprising the last three months of the year, has hitherto been distinguished only by an excess in the number of marriages. During the past quarter funerals have taken their place. 52,905 deaths were registered; which is 7,311 more than the corrected quarterly average of previous years, and 13,727 more than were returned in the corresponding season of 1845.

	1838	1839	1840	1841	1842	1843	1844	1845	1846
Deaths Registered in the December quarters of 9 years ....	40,030	41,598	44,044	39,165	39,544	42,448	43,918	39,178	52,905
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1838 at the rate of 1·75 per cent. annually..	36,685	40,380	41,086	41,805	42,537	43,281	44,039	44,810	45,594
UNHEALTHY SEASONS Difference above the calculated number..	345	1,218	2,958	..	..	..	..	..	7,311
HEALTHY SEASONS. Difference below the calculated number..	..	..	..	2,640	2,993	833	121	5,632	..

The first quarter of 1846 was remarkably healthy. The winter was mild; the rate of mortality lower than in the corresponding quarters of eight previous years. The northern districts alone, Sunderland, Newcastle-on-Tyne, and Carlisle, for instance, were striking exceptions. In the second quarter (ending June 30th) the mortality was a little above the average; and the diseases began to be prevalent in June, which raised the mortality in the third quarter (ending September 30th) 9,655 above the average of that season. There was an epidemic of diarrhoea, and what is called English cholera. In London 1,100 deaths, exclusive of those by violence and cases of inquests, were registered in the first week of August; the epidemics declined, and the deaths fell to 783 in the last week of September. The deaths, which in the last week of November were 918, rose in the four following weeks of December to 1,020, 1,111, 1,214, and 1,214, in London; and the quarterly returns indicate a still greater increase of mortality in the other towns of the kingdom.

The abstracts of 1846 for the whole of England have not yet been made out; but from the present returns it may be calculated that there were 106,000 deaths in the September quarter, which, after a correction for increase of population, is 20,000 above the average; and 110,000 in the December quarter, which is 15,000 above the average\*. The whole deaths registered in England and Wales were—

In 1838 .....	342,547	In 1842 .....	349,519
1839 .....	338,979	1843 .....	346,446
1840 .....	359,634	1844 .....	356,950
1841 .....	343,847		

\* The yearly deaths in the districts from which the Quarterly Table is framed comprise 47·11 per cent. of the deaths in all England and Wales; the proportions in the September quarter are 48·21; in the December quarter, 48·16 per cent.

And from the returns given in the Quarterly Tables, it may be deduced that the deaths in

1845 were about .....	352,000
1846 .....	406,000

The deaths in 1846 were 50,000 more than in 1845; and nearly the whole of the excess in 1846 arose on the two last quarters of the years, from diseases of a totally different character. Thus in London 1,821 deaths from diarrhoea, dysentery, and cholera, were registered in the September quarter, 389 in the December quarter; while 977 deaths from lung diseases (exclusive of consumption) were registered in the September, and 2,628 in the December quarter. Upon referring to the table (p. 91) it will be seen, that small pox, measles, scarlatina, hooping cough, croup, and thrush, which proved fatal to 1,987 persons, chiefly children, in the December quarter, 1845, only destroyed 963 lives in the December quarter, 1846, when diarrhoea, dysentery, cholera, and influenza, were unusually common, and typhus carried off 619 persons, of all ages. Bronchitis (in many cases a consequence of influenza), asthma, hernia, colic or ileus, diseases of the stomach and liver, and rheumatism, were more than usually fatal. 397 persons (including suicides) died violent deaths—a number nearly 100 greater than died from the same causes in the December quarter of 1845. The deaths from cold and want were nearly twice as numerous as in previous years. A great increase in another very distressing class of cases will be observed. In the thirteen weeks 163 mothers died in childbirth. Only 95 deaths were registered from the same cause in the corresponding quarter of 1845. It is to be regretted that steps are not taken in this country to educate nurses and midwives, on whose care and services the lives of women in childbirth often depend.

The increased mortality in London gives but a faint notion of the mortality in the large towns of the country. The deaths in the December quarters of 1845 and 1846 were respectively 11,695, and 13,033 in the London districts; 27,483 and 39,872 in the other districts which made returns. The deaths in the December quarters of 1845 and 1846 were in Maidstone, 175 and 262; Brighton, 251 and 375; Winchester, 96 and 163; Oxford, 90 and 189; Bedford, 131 and 327; Colchester, 85 and 152; Ipswich, 145 and 212; Dorchester, 95 and 135; Exeter, 203 and 267; St. Thomas (surrounding Exeter), 183 and 276; Plymouth, 180 and 306; Portsea Island, 347 and only 380; Bristol, 363 and 471; Stroud, 171 and 227; Shrewsbury, 99 and 151; Dudley, 475 and 768; Walsall, 225 and 300; Wolverhampton, 464 and 630; Wolstanton and Burslem, 171 and 327; Birmingham and Aston, 1,007 and 1,787; Leicester, 354 and 460; Stockport, 437 and 793; Macclesfield, 293 and 425; Great Boughton (including Chester), 235 and 392; Liverpool and West Derby, 2,655 and 3,846; Blackburn, 435 and 853; Preston, 552 and 968; Bury, 437 and 717; Wigan, 402 and 675; Prescott, 290 and 510; Manchester, Salford, and Chorlton, 2,555 and 4,029; Ashton and Oldham, 1,018 and 1,485; Sheffield, 527 and 805; Huddersfield, 574 and 960; Leeds and Hunslett, 891 and 1,389; Hull, 261 and 404; York, 231 and 342; Gateshead, 215 and 426; Tynemouth, 320 and 498; Newcastle-on-Tyne, 434 and 888; Carlisle, 183 and 327; Cocker-mouth, 173 and 262; Abergavenny, 241 and 332; Wrexham, 177 and 348; Holywell, 185 and 268. It will be observed, that the manufacturing parts—the iron, coal, pottery, cotton, and woollen districts—and generally the counties north of Staffordshire, were most severely visited.

Referring to the Registrars' notes, the high mortality in the towns of the country, is in many places ascribed to typhus. The diarrhoea of the summer quarter was succeeded by fever; generally "of the form accompanied by considerable disorder of the digestive organs." It was apparently the typhus characterized by ulcerations of the intestinal glands (dothinenteria) rather than typhus with petechiæ. The epidemic of diarrhoea continued in several towns: and scarlatina—the disease most fatal to children between five and ten years of age, and which tracks their path up to twenty—raged with great violence in several districts, but chiefly in the northern counties. It was fatal to between 200 and 300 persons in Newcastle-upon-Tyne alone. Bronchitis and other inflammations or congestions of the chest were the immediate consequences of the cold weather, and the causes of many deaths, particularly amongst persons afflicted with asthma and heart disease.

The mean temperature of the quarter at Greenwich was 44°2, which is 1°9 below



the temperature of the corresponding quarter of 1845, and  $1^{\circ}3$  below the average of the quarter for 25 years, but  $1^{\circ}8$  above the temperature of the last quarter of 1844. The mean dew point was  $41^{\circ}$ . The rain was 8.16 inches. The horizontal movement of the wind, which was at the rate of 751 miles a week in the summer, became 1,003 miles a week. At the close of November the wind, which had been S. and S.S.W. went round to the N.N.W., and the mean temperature from  $46^{\circ}$  fell below the freezing point. The mean temperature of the week ending December 5th was  $32^{\circ}$ ; the highest was  $38^{\circ}$ , the lowest  $25^{\circ}$ ; the highest in the sun  $57^{\circ}$ , the lowest on the grass  $10^{\circ}$ . The next week the mean temperature rose a little, but fell on the week following to  $30^{\circ}$ : the lowest temperature of the atmosphere was  $20^{\circ}$ , of the grass on the ground  $9^{\circ}$ , of the water of the Thames  $31^{\circ}$ . Upon the whole the weather in December, 1846, was not so severe as the weather in December, 1844; and in London the mortality of the quarter was not so great in 1846 as in 1844. The aggregate mortality in the December quarter, 1844, was 43,918; in the same quarter of 1846 it was 52,905. It may therefore be concluded that though the cold was fatal to many lives in both years, it was not the chief cause of the excessive mortality in the last quarter of 1846.

The Registrar of St. George, Manchester, after stating that the great number of deaths in his district—406—may be partly accounted for by the prevalence of measles and typhus, goes on to say:—

“The population of the district is to a great extent composed of the lower order of Irish, who live and lodge together in great numbers in the same house. In one part of the district, called ‘Angel Meadow,’ it is not uncommon to find twenty or thirty persons living in one house, when there is not accommodation for one-third of that number, especially if health is to be in the least considered. During the last two or three months large numbers of the poor from Ireland have crowded themselves in the district, droves of them rambling about the streets, seeking lodgings, and no doubt being exposed to the severe and inclement weather. Many of the poor creatures have died from cold producing fever and other diseases. Owing to the great increase of mortality during the last few weeks, I instituted inquiries as to the length of time the deceased had been in England, and found in very many cases they had been only a few weeks. The poverty and destitution of the district at the present time is very great. The houses are badly ventilated, and the unhealthy odour arising from so many persons huddled together in a confined apartment, must have a very injurious effect. It cannot be surprising that while such a state of things exists, the mortality should be so great.”

The same thing is noticed in Liverpool. The Registrar of St. Thomas says:—“A considerable portion of the increase [of deaths] arises from the great influx of poor people from Ireland, most of whom are quite destitute when they arrive. Some have been only a few weeks, others a few days in the town previous to their death.”

The population of the United Kingdom, which was about 28,487,000 in the year 1846 probably increased at the mean rate of 800 daily. The daily births exceed the deaths by 1,056; and the surplus of 256 is the average number who leave the United Kingdom. The emigrants from England are constantly replaced by nearly an equal number of the natives of Scotland and of Ireland, who, it is estimated, amounted to upwards of 27,000 a year in the ten years 1831-41†. The sad condition, and the habits of these poor Irish immigrants have no doubt contributed to deteriorate the health of Liverpool, Glasgow, and Bristol—the ports through which they enter—as well as to raise the mortality of Manchester and other inland towns. They may also introduce fevers and other diseases into England. As the different families of men are of one kind and of one blood, they have diseases in common. Like living things, epidemics do not cease with the circumstances in which they are produced; they wander to other places, and descend to remoter times. The plagues of the Eastern empire†, and the “black death,” depopulated the west-

\* Registrar-General's Seventh Annual Report, 8vo., pp. 5-10.

† In the reign of M. Aurelius, A.D. 167, the real Oriental plague was carried into Europe by the army returning from the Parthian war, and spread all over the western world, Asia Minor, Greece, Italy, Gaul, &c. Africa alone was perhaps not reached by it. This pestilence must have raged with incredible fury, and it carried off innumerable victims. As the reign of M. Aurelius forms a turning point in so many things, and above all in literature and art, I have no doubt that this crisis was brought

ern world; the Egyptian ophthalmia blinded thousands in Europe; the *febris castrensis*—a typhus called *fièvre meningite cattarrhale de congelation*, by Larrey—which broke out in the French army after their disastrous retreat from Moscow, became contagious and committed terrible ravages among the peaceful citizens of Poland, Prussia, Saxony, Germany, and France\*; the cholera epidemic, generated in the miserable population of Asia, on the banks of the Ganges, traversed England from Sunderland to London and the Land's End. If all nations, however remote, are liable to suffer from each others' maladies, and have, therefore, a direct interest in each others' well-being, the principle holds with tenfold force of the provinces of the same kingdom, and the inhabitants of the same cities. The unhealthy and miserable parts of the population, who are left with an imperfect claim to relief on the property of their native soil, exercise, in a variety of ways, a deleterious effect on the rest of the empire, both when they are suffered to feed at home in hovels on one kind of the lowest and most precarious subsistence—the failure of which entails starvation on men, women, and children, or lights up fever—and when they have strength left, to quit their parishes and kindred to seek a livelihood in England. But the extraordinary mortality of Manchester and Liverpool in 1846, cannot be ascribed, in any great extent, to the influx of Irish: in Manchester, for example, this influx is stated to have taken place during “the last two or three months.” Now the mortality of Manchester, Salford, and Chorlton, which is, under ordinary circumstances, nearly double the mortality of the healthiest parts of the kingdom, rose from 2,411 in the three months July, August, September, 1845, to 4,248 in the same months of 1846, before the tide of Irish destitution had set on Lancashire. The increase of mortality commenced at the same time, and has continued since in Birmingham, Oxford, Bedford, and in other towns, large and small, where the Irish population is inconsiderable.

The “high price of provisions,” “depression of trade,” and “distress,” are referred to by the Registrars of Stockport and Little Bolton, as causes of the high mortality in December. The failure of the potato crop and the dearness of provisions left the poor very ill able to provide the additional clothing and firing required by the severities of the weather, and their sufferings must have been aggravated where their earnings were at the same time diminished. As this “distress” is not adverted to in the preceding September quarter, and but rarely in the December quarter, it will not account for the excessive mortality of the half-year. In connexion with cold, however, want was the cause of many deaths in December.

No mention is made of the potato disease having had any direct connexion with the mortality. The potato, in a state of partial disease, has no doubt been extensively consumed without giving rise to any specific malady in man, or, indeed, having any appreciable connexion with the disorders of the bowels and fever, which grew prevalent about the time the last crop came into use. The absurd and unfounded fancy, that the cholera epidemic, so fatal to infants at the breast and old people, as well as others, is caused by fruit, or has any connexion with the “plum season,” derives not the slightest support from the observations of the year, when the supplies of fruit was unprecedentedly scanty. Dr. Baly, the physician to the Milbank Penitentiary, showed some time ago that scurvy was very prevalent in prisons from the dietaries of which potatoes were excluded, and did not exist where potatoes were used†. The potato contains a small quantity of a vegetable acid, in combination with potash (bitartrate of potash, or cream of tartar). It is certain that scurvy, which was formerly common, has almost disappeared since the potato entered largely into the food of the population. If, now that the potato has grown scarce, this disease—characterized, among other symptoms, by swollen bleeding gums—again become prevalent, its simple prophylactics should be had recourse to.

about by that plague. \* \* \* The happiness of M. Aurelius was thus disturbed by the plague, which was carried into Europe from the East, and by the wars with the Germans. \* \* \* It increased in the reign of Decius, that is, from A.D. 256. During the ravages made by the barbarians, it spread all over the empire; it now raged in Africa and Egypt, and became settled.—*Niebuhr, Hist. Rome*, vol. v., pp. 281-2, 345.

\* “Chirurgie Militaire et Campagnes,” de Baron D. J. Larrey, vol. iv., pp. 139, 147, 455.

† “Medical Gazette.”



In the above observations on the mortality of particular districts, the mortality of the past year has been compared with the mortality of the same districts in previous years. Manchester, in 1846, has been compared with Manchester in 1845, and other years. I shall here call attention for a moment to the difference in the mortality of different places, in the same years. The mortality of 1846 was raised much above the average in both Anglesea and Manchester.

The population of Manchester, Salford, and Chorlton, in 1841, was ....	356,372
The deaths in the December quarter of 1845 were .....	2,555
The deaths in the December quarter of 1846 were .....	4,029
The population of the Anglesea district in 1841 was .....	38,105
The deaths in the December quarter of 1845 were .....	163
The deaths in the December quarter of 1846 were .....	206

Allowing for increase of population, the inhabitants of Manchester, &c., were probably ten times as numerous as the inhabitants of Anglesea; the mortality was fifteen times as great in 1845, and 20 times as great in 1846.

Again:—The population of Hull was 41,130; the deaths in 1845 were 261; in 1846 they were 404. The population of the Isle of Wight was 42,547; the deaths in 1845 were 167; in 1846 they were 201.

Innumerable examples of the same kind may be given, from calculations now in progress.

It is found from the returns of the seven years 1838-44, that the mortality of Liverpool and Manchester, and the worst parts of other towns, is nearly double the mortality of tolerably salubrious districts\*; and it is here seen, that while the mortality of the latter districts was raised 50 or 60 per cent., the ordinary but unnatural and frightful mortality of the denser districts was raised from 70 to 100 per cent. in 1846 over what it was in 1845.

It is well known that the decaying matters of marshes give rise to agues, dysenteries, and fevers; and it is proved satisfactorily by the facts collected under the Registration Act, that the excessive mortality from diseases of the zymotic and other classes, observed in towns, is occasioned by animal or vegetable poisons, with which the atmosphere is charged, in different degrees of concentration, depending on accumulated filth, crowding in dwellings and workshops, the closeness of courts, imperfect supplies of water, and the want of efficient sewers. The high temperature of the summer of 1846, in which the mean thermometer ranged from 0°2 to 7°7 above the average during ten weeks out of thirteen, accelerated the decomposition, and increased the virulence of these effluvial poisons, as well as of the diseases which they promote. Once grown epidemic, the diseases continued to rage during the rest of the year. Thus the mortality of 1846 may be accounted for. If it took place in obedience to any cyclical law, or to a general cause acting simultaneously in Asia and Europe, the great fact remains, that the deaths were nearly twice as numerous in ill-constructed towns, where the poison is concentrated, as in the country, where it is diluted and destroyed by the fresh air.

The precise degree of influence which the various agencies have in causing the high mortality of towns, is not easily determined. Opinions differ as to what fraction of the suffering and death is to be set down to the want of water or of sewerage—crowded lodgings, narrow streets, ill-ventilated workshops—the destitution of skilful medical advice—the neglect of children—doses of opium and overflowings of quackery—slaughterhouses and rank churchyards. Similar discrepancies of opinion existed formerly as to the causes of the ill-health and inefficiency of the navy. Down to the end of the last century the loss of life in our shipping was immense. The first fleet of the East India Company, out of 528, lost 100 men before and 5 after landing, in the voyage of seven months to the Cape of Good Hope. Anson, in three ships, lost 626 men out of 961 in ten months after leaving England. The men had scurvy, dysenteries, putrid fevers; their limbs dropped off, they swooned and died. In the year 1780 the Channel Fleet sent 11,732 sick to Haslar Hospital; 1,457 had scurvy, 240 dysentery, 5,539 fever. At that time, Sir James Saumarez said, “neither the ships nor men could keep the sea more than two months†.” Captain Cook left Deptford in 1772 with 112 men, sailed round the world, and returned in

\* Seventh Report, 8vo., pp. 332-3.

† Cited by Sir Gilbert Blane, *Diss.* vol. i. p. 18.

three years with the loss of only four men by accidents, and *one* by disease. Cook, in a paper read before the Royal Society, described the means which he employed to secure the health of his crew ; the care which was taken in the selection of a vessel, in drying and ventilating, in providing good provisions, antiscorbutics, and an abundant supply of fresh water. In the third voyage the men were equally healthy. After some years had elapsed, and a reform of the Naval Administration\*, the principles established by Cook were carried out by the Admiralty, and the health of the navy was raised to a satisfactory standard. In Parry's three voyages of a year and a half and two years' duration, only seven men died out of 334. The annual mortality in the last voyage was 0·5 per cent. Cook did not wait till it had been settled how much of the sickness at sea was caused respectively by bad ships, dirty water, rotten provisions, the want of ventilation and of lemon juice. He procured, amidst great difficulties, *all* that he believed was requisite to the health of the men. The experiment, though not an *experimentum crucis*, as applied to any one cause, was successful. It did not solve a physiological problem, but it saved the men's lives. If the general measures for the health of towns announced are proceeded with, they will no doubt be as successful as the similar measures introduced into the navy, and crowned in Cook by the award of the Royal Society in the last century. He who raises the industrious population of this many-cited kingdom to the natural standard of health, will confer a greater service than Cook on the country ; and will indeed be *parens ac deus salutis nostræ*, if according to Pliny, *deus est mortali, juvare mortalem ; et hæc ad æternam gloriam via*.

\* M'Culloch's Statistics of the British Empire.

Deaths in the Metropolis from all Causes, exclusive of Violent and Sudden Deaths.

umber of Weeks.....	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	Total.	
utumn Quarter {	1844	910	992	879	909	943	949	1,006	877	1,011	954	1,150	1,326	1,170	13,076
	1845	801	759	750	763	905	917	918	883	938	928	947	918	887	11,314
	1846	858	872	798	872	938	912	889	937	918	1,020	1,111	1,214	1,214	12,543
eanTemperature {	1844	54·6	51·6	48·6	46·1	44·2	43·8	49·9	44·5	37·6	31·7	28·2	37·0	33·4	42·4
	1845	55·0	47·7	52·9	45·9	48·9	47·2	44·8	45·5	46·1	42·4	39·2	43·6	40·1	46·1
	1846	53·5	56·4	50·5	49·1	43·2	49·1	44·1	47·8	45·8	32·0	35·9	29·9	36·3	44·2

Deaths Registered in the Four Quarters of the Eight Years 1839-1846, in 115 of the Districts of England and Wales.

	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.
March .....	42,258	46,206	46,809	44,746	43,620	45,965	49,874	43,708
June .....	41,120	41,903	38,961	38,441	40,216	38,851	40,729	43,582
September .....	37,189	39,337	35,899	39,249	36,815	38,782	36,008	51,235
December .....	41,598	44,044	39,165	39,544	42,448	43,918	39,178	52,905
Total .....	162,165	171,490	160,834	161,980	163,099	167,516	165,789	191,430



## MORTALITY OF THE COUNTRY.

*Quarterly Table of the Mortality in 115 of the Districts of England (including Principal Towns), showing the Number of Deaths Registered in the Quarters ended December of the Four Years 1843-44-45-46.*

Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending Dec. 31st.				Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending Dec. 31st.			
		Years.						Years.			
		1843.	1844.	1845.	1846.			1843.	1844.	1845.	1846.
<i>Metropolis*.</i>											
West Districts..	301,326	1,944	1,987	1,694	1,826	<i>North Midland Division.</i>					
North Districts..	366,303	2,408	2,353	1,908	2,356	Leicester .....	50,932	343	387	354	
Central Districts	374,759	2,738	2,431	2,260	2,390	Lincoln .....	36,110	210	160	158	
East Districts ..	393,247	3,199	2,909	2,638	2,901	Nottingham....	53,080	357	382	305	
South Districts..	479,469	3,647	3,826	3,195	3,560	Basford .....	59,634	280	345	252	
						Derby .....	35,015	260	210	188	
Total†.....	1,915,104	13,936	13,656	11,695	13,033	Total .....	234,771	1,450	1,484	1,257	
<i>South Eastern Division.</i>											
Maidstone.....	32,310	268	204	175	262	<i>North Western Division.</i>					
Brighton.....	46,742	282	302	251	375	Stockport .....	85,672	534	474	437	
Isle of Wight ..	42,547	197	235	167	201	Macclesfield ..	56,018	307	344	293	
Portsea Island ..	53,036	338	341	347	380	Great Brough-					
Winchester ....	23,044	132	152	96	163	ton (including	49,085	257	263	235	
Windsor.....	20,502	73	93	86	87	Chester).....					
						Liverpool .....	223,054	1,855	2,130	1,981	
Total .....	218,181	1,230	1,327	1,122	1,468	West Derby					
<i>South Midland Division.</i>											
St. Albans .....	17,051	74	94	75	91	(adjoining	88,652	625	814	674	
Wycombe .....	34,150	192	198	136	182	Liverpool) ..					
Oxford.....	19,701	85	103	90	189	Blackburn ....	75,091	462	577	435	
Northampton ..	28,103	174	181	140	181	Preston .....	77,189	459	429	552	
Bedford .....	31,767	220	203	131	327	Rochdale .....	60,577	309	329	414	
Cambridge ....	24,453	211	143	112	151	Bury .....	77,496	439	445	439	
Total .....	155,225	956	922	634	1,121	Bolton .....	97,519	624	621	822	
<i>Eastern Division.</i>											
Colchester.....	17,790	114	122	85	152	Wigan .....	66,032	523	371	402	
Ipswich .....	25,254	147	135	145	212	Prescott .....	43,739	223	237	290	
Norwich.....	61,846	279	466	305	361	Chorlton .....	93,736	658	710	691	
Yarmouth .....	24,031	154	164	100	133	Manchester....	192,408	1,438	1,652	1,413	
Total .....	128,921	694	887	635	858	Salford .....	70,228	517	525	451	
<i>South Western Division.</i>											
Devizes .....	22,130	132	109	102	137	Ashton .....	173,964	1,060	1,129	1,018	
Dorchester.....	23,380	146	95	95	135	Total .....	1,530,460	10,340	11,050	10,547	
Exeter.....	31,333	295	194	203	267	<i>York Division.</i>					
St. Thomas .....	47,105	223	217	183	276	Sheffield .....	85,076	546	599	527	
Plymouth .....	36,527	227	279	180	306	Huddersfield ..	107,140	478	530	574	
Redruth .....	48,062	219	311	183	265	Halifax .....	109,175	562	596	695	
Penzance .....	50,100	234	366	23	269	Bradford .....	132,164	809	833	1,039	
Bath.....	69,232	478	420	342	414	Leeds & Hunslett	168,667	1,070	1,103	891	
Total .....	327,869	1,954	1,931	1,501	2,069	Hull .....	41,130	317	314	261	
<i>Western Division.</i>											
Bristol.....	64,298	518	523	363	471	York .....	47,779	257	336	231	
Clifton.....	66,233	395	385	378	403	Total .....	691,131	4,039	4,318	4,218	
Stroud.....	38,920	191	193	171	227	<i>Northern Division</i>					
Cheltenham ....	40,221	197	222	194	221	Sunderland ....	56,226	307	269	378	
Hereford.....	34,427	194	187	165	199	Gateshead ....	38,747	261	214	215	
Shrewsbury ....	21,529	135	166	99	151	Tynemouth .....	55,625	276	267	320	
Worcester .....	27,130	170	150	149	198	Newcastle-on-					
Kidderminster..	29,408	145	189	158	145	Tyne.....	71,550	423	374	434	
Dudley.....	86,028	414	697	475	768	Carlisle .....	36,084	230	204	183	
Walsall .....	34,274	150	179	225	300	Cockermouth ..	35,676	159	164	173	
Wolverhampton	89,722	474	489	461	630	Kendal .....	34,694	149	160	213	
Wolstanton ....	32,669	179	209	171	327	Total .....	328,902	1,805	1,652	1,916	
Birmingham....	138,187	998	964	777	1,341	<i>Welsh Division.</i>					
Aston .....	50,928	307	326	230	446	Abergavenny ..	50,834	277	264	241	
Coventry.....	31,028	191	244	193	225	Pontypool ....	25,037	89	124	168	
Total .....	776,002	4,658	5,123	4,212	6,052	Merthyr Tydvil	52,864	372	459	334	
						Newtown .....	25,958	99	97	123	
						Wrexham.....	39,542	209	181	177	
						Holywell .....	40,787	196	228	185	
						Anglesey .....	33,105	144	155	163	
						Total .....	273,127	1,386	1,508	1,391	
						Ditto, exclu-	4,664,589	28,512	30,262	27,483	
						sive of the					
						Metropolis )					
						Grand Total ..	6,579,693	42,448	43,918	39,178	

\* Wandsworth District is included in the return for the Metropolis.

† The last quarter in the Metropolis ended December 26th, 1846.

‡ The former District of Leeds is now divided into the districts of *Leeds* and *Hunslett*, both included in present return.

## MORTALITY OF THE METROPOLIS.

*Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending December of the Four Years, 1843-44-45-46.*

CAUSES OF DEATH.	Quarters ending December.				CAUSES OF DEATH.	Quarters ending December.			
	1843.	1844.	1845.	1846.		1843.	1844.	1845.	1846.
CAUSES.....	13,936	13,656	11,695	13,033	III. Cephalitis.....	152	160	142	148
CLASSIFIED CAUSES.....	13,826	13,619	11,631	12,986	Hydrocephalus....	471	372	386	342
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	2,946	2,991	2,724	2,198	Apoplexy.....	249	311	272	347
II. SPORADIC DISEASES.					Paralysis.....	235	235	213	267
I. Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	1,418	1,338	1,069	1,272	Convulsions.....	758	639	450	548
II. Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	2,080	2,001	1,727	1,959	Tetanus.....	7	4	6	5
III. Diseases of the Lungs and of the other Organs of Respiration.....	4,440	4,265	3,567	4,313	Chorea.....	1	6	..	1
IV. Diseases of the Heart and Blood Vessels.....	331	474	417	572	Epilepsy.....	36	54	68	77
V. Diseases of the Stomach, Liver, and other Organs of Digestion.....	1,002	854	875	1,042	Insanity.....	22	14	30	18
VI. Diseases of the Kidneys, &c.....	89	101	140	141	Delirium Tremens..	21	25	33	42
VII. Childbirth, Diseases of the Uterus, &c.....	143	173	141	227	Disease of Brain, } &c.....	128	121	127	164
VIII. Rheumatism, Diseases of the Bones, Joints, &c.....	70	94	89	125	IV. Laryngitis.....	14	17	27	33
IX. Diseases of the Skin, Cellular Tissue, &c.....	26	16	35	50	Quinsey.....	26	35	10	14
X. Old Age.....	980	898	519	651	Bronchitis.....	286	394	591	892
XI. Violence, Privation, and Intemperance.....	301	414	328	436	Pleurisy.....	22	30	43	43
					Pneumonia.....	1,729	1,405	1,131	1,101
Small Pox.....	114	571	106	42	Hydrothorax.....	80	86	48	46
Measles.....	456	385	927	105	Asthma.....	320	366	190	313
Scarlatina.....	718	872	269	322	Phthisis or Consumption.....	1,771	1,676	1,382	1,685
Whooping Cough.....	468	277	557	368	Disease of Lungs, &c.....	192	256	145	186
Croup.....	127	102	82	65	V. Pericarditis.....	14	35	22	26
Thrush.....	87	52	46	61	Aneurism.....	9	10	19	16
Diarrhoea.....	268	129	199	331	Disease of Heart, &c.....	308	429	376	530
Dysentery.....	103	34	25	43	VI. Teething.....	270	171	113	103
Cholera.....	14	5	11	15	Gastritis.....	235	15	10	28
Influenza.....	40	32	20	66	Enteritis.....	20	184	114	112
Ague.....	6	14	3	6	Peritonitis.....	20	29	45	55
Remittent Fever.....	8	10	12	17	Tabes Mesenterica..	136	101	162	177
Typhus.....	460	385	358	619	Worms.....	11	11	10	5
Erysipelas.....	67	106	77	106	Ascites.....	21	24	29	26
Syphilis.....	9	17	31	32	Ulceration (of Intestines, &c.) ..	32	20	35	36
Hydrophobia.....	1	..	1	..	Hernia.....	21	27	22	47
Inflammation.....	40	8	..	..	Colic or Ileus.....	33	29	16	34
Hæmorrhage.....	49	40	20	30	Intussusception....	6	8	6	9
Dropsy.....	346	337	134	170	Stricture.....	5	6	12	8
Abscess.....	30	30	20	18	Hæmatemesis.....	6	9	15	13
Noma.....	..	..	2	3	Disease of Stomach, &c.....	80	52	71	101
Mortification.....	65	61	27	47	Disease of Pancreas..	..	1	1	3
Purpura.....	4	6	8	5	Hepatitis.....	17	23	54	50
Scrotula.....	37	37	65	71	Jaundice.....	24	34	29	37
Cancer.....	144	157	206	217	Disease of Liver, &c.....	83	108	127	194
Tumour.....	8	4	1	2	Disease of Spleen ..	2	2	4	4
Gout.....	13	10	18	14	VII. Nephritis.....	10	5	11	1
Atrophy.....	172	164	186	255	Ischuria.....	3	1	..	1
Debility.....	270	281	246	301	Diabetes.....	5	10	12	3
Malformations.....	30	17	54	46	Cystitis.....	3	4	6	3
Sudden Deaths *.....	170	186	82	93	Stone.....	1	9	11	8
					Stricture.....	11	12	20	18
					Disease of Kidneys, } &c.....	56	60	80	107
					VIII. Childbirth.....	95	121	95	163
					Paramenia.....	4	..	7	6
					Ovarian Dropsy....	5	9	8	7
					Disease of Uterus, } &c.....	29	43	31	51
					IX. Arthritis.....	2	..	3	3
					Rheumatism.....	27	43	46	67
					Disease of Joints, } &c.....	41	51	40	55
					X. Carbuncle.....	4	1	3	1
					Phlegmon.....	1	2	1	9
					Ulcer.....	8	8	15	15
					Fistula.....	7	1	3	8
					Disease of Skin, &c.....	6	4	13	17
					XI. Old Age.....	980	898	519	651
					XII. Intemperance.....	8	10	23	24
					Privation.....	5	10	6	15
					Violent Deaths....	288	394	299	397
					Causes not specified	110	37	64	47

\* Inquests in which the cause of death was not assigned.



## QUARTERLY METEOROLOGICAL TABLE.

Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

1846 Weeks ending	Phases of the Moon.	THERMOMETERS.										In the Water of the Thames at Greenwich by the Self-Registering Thermometer read at 9 o'clock.	Difference between the dew point temperature and air temperature.	Difference between the mean temperature of the week, and the mean temperature of the same week on an average of 25 years.	WIND.			The amount of Horizontal movement of the air in each week.	Mean amount of Cloud, 0-10.	Rain in inches [7 days.]	Deaths at Three Ages, exclusive of violent and sudden Deaths.					
		Dew Point.		Self-Registering.		Mean.		General Direction.	Greatest pressure in the week.	Mean for the week.	Pressure in lbs. on the square foot.				0 to 15.	15 to 60.	60 and upwards.									
		Lowest on the Sun.	Highest in the Grass.	During the week.	Mean of 7 observations.	Of the highest on each day from 7 observations.	Of the lowest on each day from 7 observations.																			
																					Mean of 72 results.	Mean of 72 observations weekly.	Of the Highest on each day, from 6 observations.	Of the Lowest on each day from 6 observations.	Difference.	
Oct.	3 1st qtr, Sept. 20th	29.555	65.8	40.3	61.3	45.2	16.1	53.5	49.7	—	59.3	3.7	9.5	0.2	—	0.5	S.W.	0.3	0.0	580	68.0	74	410	282	156	858
"	10 Full, Oct. 4th	29.300	63.0	47.6	60.6	51.7	8.9	56.4	51.9	—	57.0	4.5	9.0	1.5	+	3.3	S.S.W.	8.0	1.1	1900	7.7	0.85	393	316	161	872
"	17 Last quarter, 12th	29.240	60.9	39.3	55.9	45.2	10.7	50.5	47.9	—	54.1	2.6	6.9	0.2	—	0.3	S.	6.5	0.3	925	7.7	2.41	359	274	165	798
"	24 New, 20th	29.356	62.5	38.0	55.7	43.2	12.5	49.1	44.3	—	50.3	4.8	10.5	1.4	—	1.1	S.W.	9.0	0.9	1570	6.9	1.42	344	334	183	862
"	31 1st quarter, 27th	30.013	52.6	37.2	46.4	40.0	6.4	43.2	42.4	—	47.2	0.8	2.0	0.0	—	3.7	Calm.	0.8	0.0	200	9.5	0.12	380	348	209	938
Nov.	7 Full, Nov. 2nd	30.002	61.0	39.2	53.6	44.2	9.4	49.1	47.1	—	47.4	2.0	4.9	0.3	+	3.2	S.S.E.	0.3	0.0	580	7.5	0.03	384	331	195	912
"	14 Last quarter, 10th	30.241	50.5	38.9	48.0	40.7	7.3	44.1	40.0	—	46.5	4.1	6.5	1.4	+	0.4	E.N.E.	2.0	0.1	840	8.1	0.00	370	331	188	889
"	21 New, 18th	29.673	55.7	39.2	51.3	45.0	6.3	47.8	44.7	—	45.4	3.1	7.0	1.5	+	5.3	S.	10.5	0.4	1465	6.8	0.58	379	347	211	937
"	28 1st quarter, 25th	29.373	56.0	31.2	49.5	41.2	8.3	45.8	43.6	—	45.9	2.1	4.3	0.6	+	4.2	S.S.W.	10.5	0.1	1125	7.8	1.01	393	318	202	918
Dec.	5 Full, Dec. 2nd	29.639	38.4	25.0	35.4	28.1	7.3	32.0	29.1	—	38.7	2.9	6.3	0.7	—	10.8	N.N.W.	1.5	0.0	590	5.8	0.08	431	352	236	1020
"	12 Last quarter, 10th	29.784	43.5	25.5	39.0	32.6	6.4	35.9	32.6	—	36.5	3.3	6.4	1.0	—	4.0	N.	5.2	0.2	1055	8.0	0.15	436	383	291	1111
"	19 New 18th	29.626	43.8	19.8	34.4	25.6	8.8	29.9	26.6	—	32.6	3.2	6.7	0.5	—	10.3	NW&SW.	4.5	0.2	1190	5.3	0.24	487	405	322	1214
"	26 1st quarter, 25th	29.194	49.5	27.3	39.5	33.2	6.3	36.3	33.4	—	34.7	2.9	6.5	0.7	—	2.3	S.W.&N.	4.5	0.2	1005	6.6	0.53	448	399	366	1214
Mean, Highest, or Lowest of the 13 weeks.		29.621	65.8	19.8	48.5	39.7	8.8	44.2	41.0	48.5	60.7	9.0	33.0	—	—	—	—	10.5	0.3	1003	7.3	8.16	5233	4420	2685	12543

\* In reading the 20th column, it will be borne in mind that + is read "higher," and — is read "lower," than the average.

† Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, not when they occur, but at uncertain periods; and they are, therefore, excluded from this comparison of weeks.

+ Highest and Mean of twelve weeks.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th January, 1846 and 1847; showing the Increase or Decrease thereof.—(Continued from page 373 of vol. ix.)*

Sources of Revenue.	Years ending 5th January.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,105,206	18,310,865	205,659	....
Excise .....	12,177,112	12,521,250	344,138	....
Stamps .....	7,152,114	6,931,414	....	220,700
Taxes.....	4,223,842	4,272,408	48,566	....
Property Tax .....	5,026,570	5,395,391	368,821	....
Post Office.....	731,000	816,000	85,000	....
Crown Lands.....	120,000	120,000	....	....
Miscellaneous .....	120,317	317,090	196,773	....
Total Ordinary Revenue ....	47,656,161	48,684,418	1,248,957	220,700
China Money .....	1,142,924	667,644	....	475,280
Imprest and other Moneys .	323,944	192,547	....	131,397
Repayments of Advances....	1,478,959	1,070,411	....	408,548
Total Income.....	50,601,988	50,615,020	1,248,957	1,235,925
Deduct Decrease .....			1,235,925	
Increase on the Year .....			13,032	

Sources of Revenue.	Quarters ending 5th January.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs .....	4,354,789	4,514,721	159,932	....
Excise .....	3,338,837	3,608,155	269,318	....
Stamps .....	1,792,402	1,740,687	....	51,715
Taxes.....	1,876,051	1,909,899	33,848	....
Property Tax.....	386,985	450,219	63,234	....
Post Office.....	189,000	203,000	14,000	....
Crown Lands.....	25,000	30,000	5,000	....
Miscellaneous .....	68,612	29,657	....	38,955
Total Ordinary Revenue ....	12,031,676	12,486,338	545,332	90,670
China Money .....	300,859	....	....	300,859
Imprest and other Moneys	64,084	31,884	....	32,200
Repayments of Advances ....	404,179	302,449	....	101,730
Total Income.....	12,800,798	12,820,671	545,332	525,459
Deduct Decrease .....			525,459	
Increase on the Quarter.....			19,873	

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 5th Jan., 1847, was 12,834,667*l.*; the total charge upon it was 8,024,456*l.*; leaving a surplus of 4,810,211*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ending 10th Oct., 1846, and paid off out of the growing produce of that fund for the quarter ending 5th Jan., 1847, after deducting 650,000*l.* paid off out of the Sinking Fund, was 77,483*l.*



## CORN.

*Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign and Colonial Wheat, during each Week of the Fourth Quarter of 1846; together with the Average Prices for the whole Quarter.—(Continued from p. 374, vol. ix.)*

Returns received at the Corn Office, 1846.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.	Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter.	
	Weekly Average	Aggregate Ave. age of Six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average		From Foreign Countries.	From British Possessions out of Europe.
Weeks ending 1846.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.
Oct. 3 .	54 0	50 11	36 9	24 3	35 5	43 4	45 4	Oct. 8	7 0	
10 .	56 10	52 4	37 2	24 7	35 9	43 7	46 7	15	5 0	
17 .	59 10	54 2	38 8	25 8	38 3	45 5	47 3	22	4 0	
24 .	60 10	56 0	40 2	26 6	39 0	45 9	48 10	29	4 0	
31 .	61 9	57 9	41 8	27 0	41 1	46 1	50 8	Nov. 5	4 0	
Nov. 7 .	62 3	59 3	44 3	27 3	41 5	46 6	50 11	12	4 0	
14 .	61 5	60 6	44 6	26 9	42 4	46 10	50 10	19	4 0	
21 .	59 8	60 11	42 11	25 10	42 7	46 4	49 0	26	4 0	
28 .	59 0	60 10	42 9	25 11	44 2	45 10	47 6	Dec. 3	4 0	
Dec. 5 .	59 7	60 7	42 11	26 7	42 5	45 4	48 0	10	4 0	
12 .	60 3	60 4	43 1	26 5	42 11	45 0	48 7	17	4 0	
19 .	59 10	59 11	42 11	26 3	43 1	44 8	48 10	24	4 0	
26 .	61 6	60 0	43 2	26 10	43 7	45 6	49 4	31	4 0	
Average of the Quarter }	59 9	57 11	41 7	26 1	40 11	45 4	48 7	..	..	

*Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 10th October, 5th November, and 5th December, 1846; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them.—(Continued from p. 374, vol. ix.)*

## WHEAT.

Months ending.	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1846	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
10th Oct.	66,269	13,124	79,393	1,208	13,679	14,887	96,518	2,480	98,998
5th Nov.	39,386	4,735	44,121	12,749	4,637	17,386	112,412	2,578	114,990
5th Dec.	87,455	9,912	97,367	45,451	10,999	56,450	140,191	1,490	141,681

## WHEAT-FLOUR.

Months ending.	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1846	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
10th Oct.	189,173	155,902	345,075	1,811	165,572	167,383	224,798	4,750	229,548
5th Nov.	49,099	82,828	131,927	18,094	80,340	98,434	250,725	7,260	257,985
5th Dec.	85,424	90,862	176,286	89,122	88,154	177,276	245,705	9,968	255,673

## CURRENCY.

## BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 17th October, the 14th November, and the 12th December, 1846.—(Continued from p. 375, vol. ix.)*

## ISSUE DEPARTMENT.

	Weeks ending,		
	17th Oct. 1846.	14th Nov. 1846.	12th Dec. 1846.
	£	£	£
Notes issued .....	28,741,645	28,246,295	28,410,735
Government Debt .....	11,015,100	11,015,100	11,015,100
Other Securities .....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion .....	12,122,882	11,739,837	11,935,818
Silver Bullion .....	2,618,763	2,506,458	2,474,917
Total .....	28,741,645	28,246,295	28,410,735

## BANKING DEPARTMENT.

Proprietors' Capital .....	14,553,000	14,553,000	14,553,000
Rest .....	3,432,359	3,474,506	3,437,378
Public Deposits .....	5,356,260	6,777,777	9,185,471
Other Deposits .....	9,084,274	7,995,422	7,991,126
Seven Day and other Bills .....	982,438	972,112	886,995
Total .....	33,408,331	33,772,817	36,053,970
Government Securities, including Dead Weight Annuities .....	12,808,119	12,808,119	12,807,417
Other Securities .....	12,788,939	12,525,905	13,879,960
Notes .....	7,409,870	7,836,335	8,623,815
Gold and Silver Coin .....	401,403	602,458	742,778
Total .....	33,408,331	33,772,817	36,053,970

## COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 10th October, 7th November, and 5th December, 1846.—(Continued from p. 375, vol. ix.)*

Banks.	10th Oct. 1846.	7th Nov. 1846.	5th Dec. 1846.
England—Private Banks .....	4,666,865	4,808,288	4,598,194
Joint Stock Banks .....	3,289,051	3,304,540	3,188,675
Scotland—Chartered, Private, and Joint Stock Banks .....	3,665,155	3,765,264	3,996,861
Ireland—Bank of Ireland .....	4,184,575	4,431,000	4,375,035
Private and Joint Stock Banks .....	3,066,980	3,405,825	3,464,505
Total .....	18,872,626	19,714,917	19,623,270



## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending December 31, 1846; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 376, vol. ix.)*

COUNTIES.	October.	November.	December.	TRADES.	October.	November.	December.
Metropolis.....	7	16	17	<i>Agriculture and connected Trades.</i>			
Bedford .....		1		Farmers .....		1	1
Berks .....	1			Agricultural Implement Makers, &c. ....		1	2
Bucks .....				Corn Factors .....		1	
Cambridge .....		2		Millers and Malsters .....			3
Cheshire .....				Hop Merchants .....			
Cornwall .....		1		Brewers .....	1	2	1
Cumberland .....				Horse and Cattle Dealers, and Woolstaplers .....	1		1
Derby .....				<i>Mining and connected Trades.</i>			
Devon .....		1		Mining Firms .....			
Dorset .....				Blasting Works .....			
Durham .....	1			<i>Manufactures.</i>			
Essex .....	1	2		Woollen Manufacturers .....	1		1
Gloucester .....			1	Cotton .....			
Hants.....	1	2	2	Linen .....			
Hereford .....	1			Silk .....			
Hertford .....	1		1	Printers and Dyers .....			2
Huntingdon .....				Lace Manufacturers .....			
Kent .....		1	3	Hosiery .....		4	1
Lancashire.....	6	6	11	Hardware .....	1	3	5
Leicester .....			2	Earthenware .....	1		
Lincoln .....		1		Glass .....			1
Middlesex (exclusive of the Metropolis) }	1		1	Paper .....		1	1
Monmouth.....				Builders .....	1	2	4
Norfolk .....			1	Miscellaneous Manufacturers....	1	3	2
Northampton.....			1	<i>Commerce.</i>			
Northumberland .....			2	Bankers and Merchants .....	1		
Nottingham .....				Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally .....	3	5	6
Oxford .....				<i>Retail and Handicraft Trades.</i>			
Rutland .....				Bakers .....			2
Salop .....			1	Butchers .....	1		
Somerset (including Bristol) }	3	2	5	Corn and Hay Dealers .....	1		
Stafford .....	3		1	Innkeepers and Victuallers.....	5	2	6
Suffolk .....				Wine and Spirit Merchants .....	1		
Surrey (exclusive of the Metropolis) }		2	1	Dealers in Grocery, Drugs, and Spices.....	3	5	7
Sussex .....	1		1	Makers of, and Dealers in, Clothing .....		4	7
Warwick .....	3	2	5	Makers of, and Dealers in, Furniture .....	1	6	4
Westmoreland .....				Coach Builders .....			1
Wilts .....			1	Miscellaneous .....	13	5	6
Worcester .....	1		1				
York (East Riding) .....		1	2				
„ (North Riding) .....							
„ (West Riding) .....	3	3	1				
Wales.....	2	2	3				
Total .....	36	45	64	Total.....	36	45	64

# QUARTERLY JOURNAL

OF THE

## STATISTICAL SOCIETY OF LONDON.

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MAY, 1847.

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*Thirteenth Annual Report of the Statistical Society of London.*  
Session 1846-7.

In presenting the annual financial statement of the Society's affairs, duly audited, the Council have few explanatory observations to offer. The number of Fellows at the commencement of the present official year is precisely the same as at the commencement of the last, viz., 412; the number of withdrawals during the past year having been 10, and of deaths 5; while the number of elections has been 15. The income of the Society therefore remains the same, but the year's collections have fallen rather under the average, both in compositions and subscriptions. At our present rate of expenditure, however, this trifling fluctuation can give us no uneasiness; for we have a clear £100 per annum beyond the necessary outlay. But while there has been an unusual expenditure of £61 4s. in local investigations, and the abstraction of their results, and £63 3s. 4d. in the purchase of furniture and fixtures for the present apartments of the Society (of which latter sum one-half will be returned at the expiration of the term for which these apartments are held), there has not been paid in, during the past year, the common proportion of compositions. The consequence is, that, leaving the realized property of the Society untouched, there re-appears in the past year's account the balance of about £100 against the Society, which formed a constant feature in its annual statement until last year, when it was obliterated by an excess of collections. This sum is much less than the recoverable arrears of subscriptions unpaid, down to the same date; but the Council hope to see it extinguished in the course of the present year from a much more secure source than those arrears, viz., by the economy recently effected in the expenditure of the Society, which, in rent, printing, and advertising, is seen to be no less than £80 per annum less than that of past years. This sum will supply the means of completely extinguishing the adverse balance, if no expenditure take place during the current year on new local investigations. This calculation allows, however, £20 for the library; and the Council hope in future years to be enabled to apply a much more liberal sum to augment its collection of books, so as ultimately to render it a complete library of statistical science.



The statistical data respecting the population of Whitechapel, collected by the Committee, which arose out of a donation by Mr. Hallam, towards an investigation into the state of the poorer classes of the Metropolis, have been subjected to a careful and elaborate analysis, which establishes some very valuable results; and the whole, in the shape of a report to the Council, will be brought before the Society at an early meeting. Though indisposed to make any large grant at present, for further local investigations, the Council felt themselves justified in placing in the hands of their Secretaries so small a sum as £5, to be expended in procuring a statistical account of the existing provisions for the education of the poorer classes in a large portion of the coal and iron district of South Staffordshire; one of those regions, which, presenting the phenomenon of a rapidly augmenting population, without apparently any commensurate progress in civilization, seems to have peculiar claims upon our attention. The contemplated returns have already been obtained, and an abstract of them is in preparation, to be submitted to you with other authentic data, illustrative of the same subject, at an early period.

Our monthly meetings, as you are well aware, have never been wanting in interest; thanks to the efforts of individual Fellows,—efforts which have been greatly promoted by the facilities of publication afforded by the Journal. The papers on “The Prevalence and alleged Increase of Scrofula,” by Benjamin Phillips, Esq., F.R.S.; on “The Duration of Life of Sovereigns,” by W. A. Guy, Esq., M.D., Hon. Sec.; on “The Statistics of Prussia,” by the Chevalier Hebel, his Prussian Majesty’s Consul-General; on “The Accounts of the Bank of England,” by J. T. Danson, Esq., F.S.S.; and on “The Municipal Institutions and Criminal Justice of the Metropolis,” by Joseph Fletcher, Esq., Hon. Sec., present each the results of labours, as serious as could have been undertaken by a Committee of the Society, at a great expense; and the promise of individual exertion for the current year is yet greater. From one of our ablest contributors during the past year, the Council lament, however, that death has deprived us of all hope of future aid; Mr. James Butler Williams, the talented and public-spirited Author of the paper on “The Principles of Railway Management,” having died at Edinburgh on the 10th of February last.

Appended is the balance-sheet for the year, as examined and approved by the Auditors.

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
To Balance in the hands of the Treasurer	67	13	1	By Rent	150	0	0
1 for 1841				Insurance	2	10	0
3 1842				Salaries	205	0	0
4 1843				Housekeeping Expenses	34	19	6
7 1844				Printing	63	7	6
22 1845				Editing and Advertising Journal	85	12	0
286 1846				Stationery	5	8	6
Compositions	600	12	0	Parcels, including Delivery of Journal and Postages	11	12	0
Sale of Journal	21	0	0	Library	15	10	2
	48	12	11	Fixtures of Rooms	31	12	0
	£815	12	0	Solicitor to London Library	4	5	0
Assets, December 31, 1846:—				Balance paid to Petty Cash (old account)	6	6	3½
Balances of Grants to House Committee	£1	6	10	Grant to Mr. Hallam's Committee	56	4	0
Charitie's Committee	1	10	0	Grant to House Committee	20	0	0
Mr. Hallam's Committee	1	0	0	Grant to Secretaries for collecting Educational Statistics	5	0	0
Educ. Stat. Committee	5	0	0	Miscellaneous	3	4	5½
Cash Balance	107	11	0	Cash Balance	107	11	0
Petty Cash Balance	7	9	7	Petty Cash Balance	7	9	7
One Composition paid in part, 31st Dec. 1846	21	0	0				
Dividend on Stock due (one year)	28	5	0	Total	£815	12	0
Price of Fixtures to be returned on expiration of lease	31	12	0				
	204	14	5	Liabilities, December 31, 1846:—			
Stock in the Reduced 3½ per Cent., £569 17s., cost £567	867	0	0	Messrs. Harrison, Printers	£288	11	0
" Consols 3 per Cent., £328 15s. 4d. "	£300			Mr. Soane, Carpenter	4	3	10
				Mr. Gardner, Oilman	1	19	3
2 for 1841	£4	4	0	Mr. Adams, Ironmonger	3	2	6
7 for 1842	14	14	0	Messrs. Vacher, Stationers	7	7	4
9 for 1843	18	18	0				
20 for 1844	42	0	0	Total Liabilities	£305	3	11
27 for 1845	56	14	0				
75 for 1846	157	10	0	Examined, Audited, and Approved,			
Deduct Amount not likely to be paid	147	0	0	JOHN BOWRING,			
	147	0	0	JOHN FINCH,			
				JOHN DUNLOP.			
Total Assets	£2,034	6	5				

March 5, 1847.



*Vital Statistics of the East India Company's Armies in India, European and Native.* By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society.

I MAY premise, that the whole of the following data are supplied from official sources in India ; and the systematic manner in which, it would appear, the facts have been for so many years collected and recorded in India, affords a satisfactory guarantee, barring graphic errors, of the general accuracy of the record ; indeed the absolute necessity that exists for every regiment accounting for every soldier upon its rolls, and the frequently-recurring periodical musters, render mistakes extremely difficult ; and I can, from my experience as an Adjutant and Commanding-Officer, unhesitatingly express my conviction that non-effective men in the Indian army could not escape observation.

I propose to arrange the documents now submitted to the Society in three distinct classes or sections. 1st. The Vital Statistics of the Bombay Native Army, at every age from 20 to 52, for the years 1842-1843, and 1844. 2ndly. The Vital Statistics of the Indian Army, European and Native, from 1825 to 1844, both inclusive. And, 3rdly. The Vital Statistics of the Pension Establishments of the Native Armies of the three Presidencies.

The first class of documents was drawn up by the Military Auditor-General in Bombay, General Barr, with a view to determine the effect of the climate of Scinde upon the health of the troops employed in that province. The second class of documents results from an order of the House of Commons, upon the motion of Mr. Hume ; and the third class forms part of the periodical returns made from the Governments of India to the India House. The returns of the first and second classes comprise also the sickness and invaliding of the troops.

I cannot enter upon my subject without expressing, in the strongest manner, my obligations to our valuable coadjutor, Mr. Neison, who, with that indefatigable perseverance, love of his subject, and readiness to oblige, of which he has already given us so many proofs, has laboriously worked out for me the tables which I shall have to notice.

The original returns of the first class, for the years 1842-3 and 1844, independently of the sickness, mortality, and invaliding of the soldiers from the ages of 20 to 52, of every regiment of the Bombay army, exhibit also all casualties from desertions, discharges, transfers, &c., together with the country and caste of every soldier, the station at which the regiment was located for each year, and the dates of arrival and departure. A distinct return is made for the troops serving in Scinde. As these Returns, from their lengthened and elaborate character, may not be adapted for the pages of the Society's Journal, I have deemed this explanation of their character called for : the more so, as I have reason to believe that returns of this kind are unique, whether relating to the India Company's Army or the Royal troops serving in India.

Even the reduced tables, arranged for every age, are adapted rather for the closet than for detailed explanation at a public meeting. I shall confine my notices, therefore, to an enumeration of the tables, and the final results of the whole Army for each year, and the mean results for the three years. Table I. gives the absolute mortality of the Bombay Army at every year of age from 20 to 52, for the years

1842-3 and 1844. The total number of men in the year 1842 was 32,727, and the deaths 1,070, or 3·2 per cent. per annum. In 1843 the troops numbered 32,464, and the deaths 871, or 2·7 per cent. In 1844 the numbers were 33,970, and the deaths 732, or 2·25 per cent.; the deaths in all cases being inclusive of those from cholera. Table II. works out the per centage mortality of the preceding table, at each age; showing that the maximum mortality was 6·25 per cent. in the year 1842, at the age of 51, while the two following years at that age gave respectively only 2·33 per cent. and 2·44 per cent.; the minimum at any age was 0·92 at the age of 50, in the year 1844, while in the preceding years it was respectively 3·64 and 5·93 at that age. Table III. results from Table II., and gives the mean mortality of the aggregate numbers at each age for three years. The mean maximum was at the age of 51, being 3·78 per cent.; the mean minimum being 2·20 per cent. at the age of 37. Table IV. gives the mortality of the troops serving in Scinde as distinguished from the mortality of the troops serving in other parts of the territory under the Bombay Government. The per centage is struck at every age of life, and upon the averages for quinquennial periods of life. At every age the mortality is found to be considerably enhanced, the mean maximum being 4·95 per cent. between the ages of 41 to 45, inclusive, the per centage for the ages 51 and 52 being nearly the same; the mean minimum 3·64 between the ages of 46 and 50, inclusive; and the mean of the whole mortality of the troops serving in Scinde, 4·33 per cent.

Table V. gives the mortality of the troops who did not serve in Scinde, drawn up on principles similar to Table IV. The maximum mean mortality was 3·12 per cent. between the ages of 46 and 50 inclusive; the minimum, 1·81 per cent. between the ages of 36 and 40 inclusive; and the mean mortality of all ages, for the whole period, is 1·97 per cent.

It is hence shown that the healthiness of the native troops of the Bombay army, serving under their own Presidency, is nearly equal, according to Colonel Tulloch, to that of the health of the British troops at Malta, 1·87, and superior to that of the British troops at Gibraltar, 2·20, and the health of the troops serving in Canada, 2·00 per cent., and far superior to the health of the troops in the Ionian Islands, 2·83 per cent. It will be shown, however, that where the mortality of the Bombay army is deduced from a lengthened period, it is very much less than 1·97 per cent. Table VI. is based on the total column of Table I., and exhibits the mean of the Tables IV. and V., and gives the mortality of the whole Bombay army, whether serving in Scinde or elsewhere, for three years, for every age, and for quinquennial periods of life; the means being struck upon the accumulated totals of three years at each age. The mean maximum is 3·25 per cent. between the ages of 46 and 50, inclusive; the mean minimum 2·63 per cent. between 21 and 25, inclusive, and the mean mortality of all ages 2·729 per cent. Here we see that, inclusive of the effects of the climate of Scinde and the cholera, the mean mortality is less than that of the Royal troops in the Ionian Islands.

With respect to the country and caste of the troops constituting the Bombay army, it will be sufficient to give the chief features.

The Concan is the low land at the foot of the Ghâts, north and south of Bombay, and supplies a valuable class of Mahrattas as soldiers. The Deccan is the Mahratta country above the Ghâts, and I



am surprised to find so few of the troops from it. Hindoostan furnishes six-eighths of the whole army, the men being mostly Hindoos. Of castes, the Hindoos are 11 to 1 of the Moosulmans; the Low Castes constitute about one-eighth. The Jews, although small in number, are valuable, from their steadiness and ability.

COUNTRY.						CASTE.						
Concan.	Goozrat.	Deccan.	Hindoostan.	Madras.	Malabar.		Christians.	Jews.	Moosulmans.	Hindoos.	Low Castes.	Parsees.
12,421	542	2,143	16,358	238	447	1842....	328	327	2,937	24,617	4,417	..
12,010	505	2,050	16,803	243	452	1843....	310	324	2,906	24,738	4,175	11
11,959	591	2,027	17,368	266	404	1844....	331	322	2,993	26,024	4,288	12

TABLE I.—*Absolute Mortality of the Bombay Army at every Age, from Age 21 to 52 inclusive, for the Years 1842, 1843, and 1844.*

Ages.	1842.		1843.		1844.		Total.	
	Mean of Living.	Deaths.	Mean of Living.	Deaths.	Mean of Living.	Deaths.	Mean of Living.	Deaths.
21	5,942	199	6,140	192	6,049	149	18,131	540
22	2,968	84	2,834	67	2,959	45	8,761	196
23	2,976	82	3,026	70	3,048	50	9,050	202
24	2,457	74	2,796	72	2,856	71	8,109	217
25	1,983	66	2,246	70	2,320	42	6,549	178
26	1,456	45	1,725	52	1,765	24	4,946	121
27	1,042	29	1,334	28	1,407	38	3,783	95
28	682	39	875	23	897	28	2,454	90
29	520	12	610	24	648	16	1,778	52
30	418	19	466	12	494	17	1,378	48
31	379	9	349	8	366	8	1,094	25
32	510	13	362	12	386	4	1,258	29
33	692	21	457	11	494	10	1,643	42
34	869	32	606	17	627	8	2,102	57
35	1,104	46	929	18	925	25	2,958	89
36	1,015	34	924	26	953	20	2,892	80
37	1,019	26	996	28	973	12	2,988	66
38	894	35	879	14	938	34	2,711	83
39	768	29	721	10	736	21	2,225	60
40	709	35	738	20	724	18	2,171	73
41	544	11	586	18	630	10	1,760	39
42	523	14	441	12	466	14	1,430	40
43	519	26	459	10	450	15	1,428	51
44	392	20	419	7	422	11	1,233	38
45	344	18	355	9	370	10	1,069	37
46	283	11	278	7	283	6	844	24
47	234	12	225	7	230	7	689	26
48	206	5	223	7	216	11	645	23
49	174	4	157	6	149	2	480	12
50	135	8	110	4	109	1	354	13
51	96	6	86	2	82	2	264	10
52	253	6	245	8	247	3	745	17
	32,727	1,070	32,464	871	33,970	732		

TABLE II.

Age.	Per Centage of Mortality in the Bombay Army during the Years—				Age.	Per Centage of Mortality in the Bombay Army during the Years—			
	1842.	1843.	1844.	Total.		1842.	1843.	1844.	Total.
21	3.35	3.13	2.46	2.98	37	2.55	2.81	1.24	2.21
22	2.83	2.37	1.52	2.24	38	3.92	1.59	3.63	3.06
23	2.75	2.31	1.64	2.23	39	3.78	1.39	2.85	2.69
24	3.01	2.58	2.48	2.67	40	4.94	2.71	2.49	3.36
25	3.33	3.11	1.81	2.72	41	2.02	3.07	1.59	2.22
26	3.08	3.03	1.36	2.44	42	2.68	2.72	3.01	2.79
27	2.79	2.11	2.69	2.51	43	5.01	2.18	3.34	3.57
28	5.72	2.63	3.12	3.66	44	5.11	1.67	2.61	3.08
29	2.31	3.94	2.47	2.92	45	5.23	2.54	2.71	3.46
30	4.55	2.58	3.44	3.48	46	3.89	2.52	2.12	2.84
31	2.37	2.29	2.19	2.28	47	5.13	3.11	3.05	3.77
32	2.55	3.31	1.04	2.31	48	2.43	3.14	5.11	3.56
33	3.04	2.41	2.03	2.56	49	2.31	3.82	1.34	2.49
34	3.68	2.81	1.28	2.71	50	5.93	3.64	.92	3.67
35	4.19	1.94	2.71	3.01	51	6.25	2.33	2.44	3.78
36	3.37	2.82	2.11	2.77	52	2.37	3.27	1.22	2.28

TABLE III.

Mean Mortality per Cent. of the Bombay Army for 1842, 1843,  
and 1844.

Ages.	Living.	Deaths.	Mortality per Cent.	Ages.	Living.	Deaths.	Mortality per Cent.
21	18,131	540	2.9785	37	2,989	66	2.2081
22	8,761	196	2.2371	38	2,710	83	3.0627
23	9,050	202	2.2320	39	2,225	60	2.6966
24	8,109	217	2.6760	40	2,172	73	3.3610
25	6,549	178	2.7180	41	1,760	39	2.2159
26	4,946	121	2.4464	42	1,431	40	2.7953
27	3,783	95	2.5112	43	1,429	51	3.5689
28	2,455	90	3.6660	44	1,234	38	3.0794
29	1,778	52	2.9246	45	1,069	37	3.4612
30	1,378	48	3.4833	46	844	24	2.8436
31	1,094	25	2.2852	47	689	26	3.7736
32	1,258	29	2.3052	48	645	23	3.5659
33	1,643	42	2.5563	49	481	12	2.4948
34	2,102	57	2.7117	50	354	13	3.6723
35	2,958	89	3.0088	51	264	10	3.7879
36	2,892	80	2.7758	52	745	17	2.2819
76,886		2,061		21,041		612	



TABLE IV.

*Mortality of Regiments of Bombay Army serving in Scinde, at each Age, with Average for every Fifth Year.*

Ages.	Population.	DEATHS.			
		At each Age.		In Periods.	
		Total.	Per Cent.	Total.	Per Cent.
21	4,746	264	5·562	668	4·279
22	2,643	84	3·178		
23	3,048	109	3·379		
24	2,839	119	4·193		
25	2,335	98	4·198		
	15,611				
26	1,783	67	3·757	233	4·229
27	1,478	60	4·059		
28	964	48	4·979		
29	724	35	4·834		
30	560	23	4·107		
	5,509				
31	486	17	3·498	129	3·863
32	507	15	2·958		
33	624	23	3·685		
34	737	24	3·256		
35	985	50	5·076		
	3,339				
36	940	46	4·893	201	4·875
37	922	42	4·555		
38	909	43	4·730		
39	685	32	4·671		
40	667	38	5·697		
	4,123				
41	546	14	2·564	94	4·953
42	376	13	3·458		
43	372	24	6·451		
44	323	18	5·572		
45	281	25	8·897		
	1,898				
46	223	6	2·690	27	3·644
47	191	4	2·094		
48	145	7	4·828		
49	99	3	3·030		
50	83	7	8·433		
	741				
51	38	2	5·263	7	4·964
52	103	5	4·854		
	141				
Total ....	31,362			1,359	4·333

TABLE V.

Mortality of Regiments of Bombay Army not in Scinde at all during the Years 1842, 1843, and 1844, for each Age, and with Averages for every Fifth Year.

Ages.	Population.	DEATHS.			
		At each Age.		In Periods.	
		Total.	Per Cent.	Total.	Per Cent.
21	13,384	276	2·062	665	1·901
22	6,118	112	1·831		
23	6,002	99	1·649		
24	5,270	98	1·859		
25	4,214	80	1·898		
	34,988				
26	3,163	54	1·707	173	1·959
27	2,305	35	1·518		
28	1,491	42	2·817		
29	1,054	17	1·613		
30	818	25	3·056		
	8,831				
31	608	8	1·316	113	1·977
32	751	14	1·864		
33	1,019	19	1·864		
34	1,365	33	2·417		
35	1,973	39	1·977		
	5,716				
36	1,952	34	1·742	161	1·816
37	2,067	24	1·162		
38	1,801	40	2·221		
39	1,540	28	1·818		
40	1,505	35	2·326		
	8,865				
41	1,214	25	2·059	111	2·209
42	1,055	27	2·559		
43	1,057	27	2·554		
44	911	20	2·195		
45	788	12	1·523		
	5,025				
46	621	18	2·898	71	3·125
47	498	22	4·418		
48	500	16	3·200		
49	382	9	2·356		
50	271	6	2·214		
	2,272				
51	226	8	3·539	20	2·304
52	642	12	1·869		
	868				
Total ....	66,565			1,314	1·974



TABLE VI.

*Mortality of the whole Bombay Army, whether Serving in Scinde or elsewhere, at every Age, and with Averages for every Fifth Year.*

Ages.	Population.	DEATHS.			
		At each Age.		In Periods.	
		Total.	Per Cent.	Total.	Per Cent.
21	18,131	540	2·9785	1,333	2·634
22	8,761	196	2·2371		
23	9,050	202	2·2320		
24	8,109	217	2·6760		
25	6,549	178	2·7180		
	50,600				
26	4,946	121	2·4464	406	2·831
27	3,783	95	2·5112		
28	2,455	90	3·6660		
29	1,778	52	2·9246		
30	1,378	48	3·4833		
	14,340				
31	1,094	25	2·2852	242	2·673
32	1,258	29	2·3052		
33	1,643	42	2·5563		
34	2,102	57	2·7117		
35	2,958	89	3·0088		
	9,055				
36	2,892	80	2·7758	362	2·790
37	2,989	66	2·2081		
38	2,710	83	3·0627		
39	2,225	60	2·6966		
40	2,172	73	3·3610		
	12,988				
41	1,760	39	2·2159	205	2·961
42	1,431	40	2·7953		
43	1,429	51	3·5689		
44	1,234	38	3·0794		
45	1,069	37	3·4612		
	6,923				
46	844	24	2·8436	98	3·252
47	689	26	3·7736		
48	645	23	3·5659		
49	481	12	2·4948		
50	354	13	3·6723		
	3,013				
51	264	10	3·7879	27	2·676
52	745	17	2·2819		
	1,009				
Total ....	97,927			2,673	2·729

The second section of this paper comprises returns made to an order of the House of Commons, of the sickness, mortality, and invaliding of the East India Company's armies in India, European and Native, from the year 1825 to the year 1844, inclusive, distinguishing the troops, European and Native, serving under the different Presidencies of Bengal, Madras, and Bombay, and in the mortality, distinguishing the deaths from that shocking and fearful disease, spasmodic or Asiatic cholera, from the mortality from other causes. The tables, like the preceding, have been elaborated by Mr. Neison, and are carried on consecutively from the previous numbers. Table No. VII. relates to the European troops of the Bengal Presidency, and gives the annual average strength, admissions into hospital during the year, deaths from ordinary causes, deaths from cholera, invaliding, rates per cent. of ordinary deaths to strength, rates per cent. of deaths from cholera to strength, rate per cent. of deaths generally to strength; and, finally, rate per cent. of numbers invalided to strength; and all this for every year from 1825 to 1844, inclusive. The table must be referred to for details; and I shall merely state the maximum, minimum, and mean of each heading. The maximum strength was in 1844, being 5,034; the minimum strength in 1827, being 3,793 men. The maximum admission into hospital was 11,202 in 1841, out of a strength of 4,751; so that each soldier, on an average, was more than twice in hospital during the year, and some three times. But I must disclaim any confidence in the admissions into hospitals as types of general sickness; for one soldier goes twelve times into hospital during the year, and in the total of admissions counts as twelve men, while another soldier remains in the hospital the whole twelve months, and counts only as one admission. No statistical law, therefore, can be legitimately deduced from the mere totals of admissions into hospital. The minimum admissions into hospital occurred in 1827, being only 927 out of a strength of 3,793; so that not every fourth man went into hospital, although the mortality that year was great, amounting to  $8\frac{1}{2}$  per cent., indeed more than one-third of those who went into hospital died, and the invaliding in that year was  $6\frac{1}{2}$  per cent. The sum of the admissions in 20 years was 158,160, on a strength of 88,380. The maximum of deaths from ordinary causes occurred in 1825, being 539 from a strength of 4,512, producing the maximum mortality, inclusive of cholera, of the 20 years, namely,  $12\frac{1}{2}$  per cent.; the invaliding of that year, however, being only 3·7 per cent. The minimum of deaths from ordinary causes was 4·50 per cent. in 1829 from a strength of 4,466. The maximum of deaths from cholera occurred in 1843, being 107 from a strength of 5,016, or 2·13 per cent. of strength. The absolute minimum number of deaths from cholera was in 1826, being 23, or 0·53 per cent; but the *minimum per centage* of deaths upon strength was in 1830, when, although 42 died from cholera, the per centage upon strength was only 0·24. Of the invaliding, I will speak not of the absolute numbers, but of the per centage only.

The maximum *per centage* of ordinary deaths occurred in 1825, when it amounted to 11·94 per cent., cholera adding only a half per cent. to it; the minimum was in 1829, amounting to 4·5 per cent. The maximum from cholera was in 1843, amounting to 2·13 per cent., and the minimum in 1830, being 0·24 per cent. The maximum of deaths



from all causes was  $12\frac{1}{2}$  per cent. in 1825, and the minimum 5·16 in 1829. The greatest invaliding was 6·7 per cent. in 1826, and the least 1·7 only in 1835. The mean of the ordinary deaths to the strength, for 20 years, was 6·23 per cent., from cholera only 1·15 per cent., from all causes 7·38 per cent., and the mean annual invaliding 3·6 per cent.; so that, including mortality and invaliding, a regiment would be renewed in less than ten years.

The Native troops of the Bengal army having served, for the most part, in the same territories with the Europeans noticed above, it will be right, for the sake of comparison, to take them in succession. The returns in Table No. VIII. embrace precisely the same headings as those of the European troops. The maximum strength of the army was in 1825, amounting to 152,843 men; the minimum strength was in 1832, when the army was reduced to 78,846 men. The maximum admissions into hospital occurred in 1842, being 98,936 men out of a strength of 113,020 men; and it is to be remarked, that the three greatest admissions are in the consecutive years 1842–1843 and 1844, and were the details available at the present moment, I strongly believe this apparently very unusual sickly state of the Native army would be found to have originated in Scinde having been occupied by a portion of the Bengal army jointly with the Bombay troops during those years. Indeed, there is a sudden advance in the numbers who entered the hospitals from 42,632 in 1839, at the period of our entering Scinde, to 76,917 in 1840, when we were virtually masters of the province. The maximum of admissions, both of Europeans and Natives, are nearly coincident in time; but in no single year, in the worst seasons, has it occurred to the Native army to average an admission of each Native soldier into hospital during the year. The minimum of admissions was 30,903 in 1827, out of a strength of 130,313; so that less than every fourth man entered the hospital during the year. Here, then, is an absolute coincidence in time with the European minimum admissions; and it would be well could we trace the peculiar atmospheric causes of this remarkable absence of disease; but of this I fear there is not any hope. The sum of the admissions for 20 years was 1,100,735 from a strength of 2,046,425; so that the average admission was for each soldier one admission in two years.

The maximum number of deaths from ordinary causes took place in 1825, being 2,651; but this number does not indicate the maximum per centage of mortality. The minimum, 950, was in 1837, but does not indicate the minimum per centage mortality. The maximum deaths from cholera was 361 in 1843, and the minimum 136 in 1840. The total deaths from cholera in 20 years was only 4,488. The greatest invaliding took place in 1829, being 5,070, and the smallest, 594, in 1835; the maximum per centage of ordinary deaths 2·38 in 1834, and the minimum 1·04 in 1843; and yet this, excepting 1833, was the maximum cholera year, 0·31. The minimum of cholera was in 1831, amounting to only 0·02 per cent. of strength. The average mortality from ordinary causes, for 20 years, was 1·57, and from cholera only 0·22, and from both causes 1·79 per cent. The invaliding was singularly small, the maximum being 4·7 per cent. in 1829, the minimum 0·6 in 1825–6 and 1827, and the mean for 20 years 1·5 per cent. It will be remarked that the average per centage deaths of the

Native troops from cholera did not amount to one-fifth of that of the Europeans, the latter being 1·15 per cent., the former 0·22.

The following are the castes in the Bengal Native Infantry, composed of 74 regiments:—

Christians.	Mahomedans.	Brahmins.	Rajpoots.	Hindoos of Inferior Descriptions.
1,076	12,411	24,849	27,993	13,920
Grand Total.....				80,249.

So that the Hindoos, almost universally non-consumers of animal food, constitute above 83 per cent. of the whole infantry. The castes of the Bengal Native Cavalry are not specified in the returns.

The Madras army follows next in order; but scarcely any part of it served in the same localities with the Bengal troops. Table IX. relates to the European portion of it. The maximum strength was 6,083 in 1842, and the minimum 4,350 in 1825. The maximum admission into hospital was 8,134 out of a strength of 4,481; so that each soldier, on the average, was received about twice into the hospital during the year. The minimum admission was 5,234, in 1832, from a strength of 5,019, the average being rather more than an admission for each soldier during the year. The maximum of deaths, 455, as with the Bengal Europeans, took place in 1825, and the minimum was 97, in 1838, in which year the deaths from all causes were only 2·12 per cent., the European troops for that year being nearly as healthy as if in their native land. The maximum of deaths by cholera was 60, in the year 1825, and the minimum only 1, in the years 1835 and 1836. The greatest invaliding was 159, in 1826, and the least 34, in 1828. The maximum per centage of deaths from ordinary causes was 10·46, in 1825, and the minimum 1·97, in the years 1838 and 1844. The maximum per centage from cholera was 1·38, in 1825, and the minimum 0·02, in the years 1835 and 1836. The maximum per centage of deaths, inclusive of cholera, was 11·84, in 1825, and the minimum 2·12, in the years 1835 and 1838. The maximum invaliding was 3·47 in 1826, probably consequent upon the sickness of the preceding year, and the minimum invaliding was only 0·65 in 1828. The sum of the admissions into hospital for 20 years was 135,720, from a strength of 101,210, showing a considerably greater degree of healthiness, as far as admissions are a test, than in the European troops of Bengal. The total number of ordinary deaths was 3,460, from cholera 432, invaliding 2,101. The mean annual per centage mortality of ordinary deaths for 20 years was 3·419, from cholera only 0·427, instead of 1·15, as in the Bengal Europeans, and the mean annual per centage of deaths from all causes was 3·85, instead of 7·38, as in Bengal. The mean invaliding was 2·07 per cent. The mortality and invaliding combined are less than 6 per cent. per annum; so that a regiment would only be renewed in about 17 years, instead of 10, as in Bengal. The remarkable discrepancy between the healthiness of the European troops in the Madras territories and those of Bengal needs explanation. Whether it originates in physical or moral causes, whether in the atmosphere, or the habits and treatment of the men, should be questions for grave investigation.

Table X. relates to the Native army of Madras. The maximum strength was 71,488 in 1826, and the minimum strength 48,571 in



1837. The maximum admissions into hospital was 73,273, from a strength of 61,947, in that fatal year 1825; being, in fact, the only year in the whole 20 in which the admissions into hospital considerably exceeded the strength; so that many men were more than once patients. In the following year the admissions and strength were nearly the same. The minimum admissions, 29,646, occurred in 1831, from a strength of 50,417; so that little more than every other soldier entered the hospital, on an average. The greatest number of deaths from ordinary causes, 1,897, was in 1825, and the next year the intensity of the mortality was nearly as great, being 1,801, and exactly double the annual averages for 20 years. The minimum number of deaths was 540 in 1831, giving a mortality of 1·07 per cent.; but this was not the smallest per centage mortality; for the preceding year 583 deaths gave only 1·02 per cent., a circumstance probably unexampled in the history of any but the Indian Native army, that barely more than one soldier should die out of 100, within the year, from 56,715 men! The year 1843, in the Bengal army, was similarly featured, when, out of 114,728 men, only 1,605 died, or 1·04 per cent., exclusive of cholera. But this healthiness is far surpassed in nine distinct years, in the Bombay Native army. The maximum rate of mortality in the Madras army from cholera was 1·38 per cent., in 1843; the minimum was in 1835, when only two men died out of the whole army, or 0·004 per cent. The maximum mortality, inclusive of cholera, was 4·34 in 1825, and the minimum 1·25 in 1830. The maximum invaliding was 3·36 in 1825, and the minimum 0·67 per cent. in 1834. The sum of the strength for 20 years, 1,196,260, and the admissions into hospital 904,325, showing a much greater proportion than in the Bengal Native army. The total deaths were 18,088; the total deaths from cholera 6,976; the total invaliding 23,479. The mean annual average deaths for 20 years, from ordinary causes, was 1·51 per cent.; from cholera, 0·58, being more than double that of the Bengal Native troops, greater than that of the Madras European troops, but still not approaching to that of the European troops in Bengal. The mortality from all causes was 2·09 being greater than in Bengal. The invaliding was 1·96 per cent. per annum. In my final remarks I shall comment upon this mortality, as having reference to habits of life arising from caste; meanwhile I annex the castes of the Madras troops.

CAVALRY.								INFANTRY.							
1837-8.		1838-9.		1839-40.		1841-2.		1837-8.		1838-9.		1839-40.		1840-1.	
Moosulmans.	Other Castes.	Moosulmans.	Other Castes.	Moosulmans.	Other Castes.	Moosulmans.	Other Castes.	Moosulmans.	Other Castes.	Moosulmans.	Other Castes.	Moosulmans.	Other Castes.	Moosulmans.	Other Castes.
3,280	476	3,212	473	3,192	492	3,123	499	15,685	22,714	16,488	24,758	17,587	28,249	18,772	32,156
7 to 1.		7 to 1.		7 to 1.		6 to 1.		1 to 1½.		1 to 1½.		1 to 1½.		1 to 1½.	

I cannot conclude my references to Madras without a commendatory notice of a Report of a Committee of the Statistical Society upon the sickness, mortality, and *diseases* of the European and Native troops of the Madras army, founded upon valuable data supplied by the present Sir James Annesley, and printed in the *Journal* for July, 1840; but as its chief object was to illustrate the diseases prevalent in the Madras army, it does not come into the same exact category with the present paper.

Table XI. relates to the European troops of the Bombay army, being of the same form as the preceding, and for the same period of time. The maximum strength was 5,022 in 1843, and the minimum 1,727 in 1826. The maximum admissions into hospital was 6,266, from a strength of 3,667; but in 1837, the admissions were three times the strength. The minimum admissions were 1,284, in 1841, from a strength of 3,479; so that little more than one-third of the men entered the sick lists. The greatest absolute number of deaths from ordinary causes was 270, in 1843, giving a per centage of 5·37; which, however, was little more than half the per centage in 1826, when only 179 died. The minimum of deaths was 46, in 1832, giving also the minimum per centage, 1·89, during 20 years. The largest number of deaths from cholera was 90, in 1842, giving also the greatest per centage of loss from that fearful disease, namely, 1·91 per cent. In the year 1835 there was not a single death from cholera; but this was the only exception in 20 years, although there were 11 years in which the annual loss from cholera only varied from 2 to 8. The maximum per centage of ordinary deaths was 10·36 in 1826, and the least, 1·89 per cent., in 1832. The greatest and least loss from cholera have been already stated. The maximum loss, cholera inclusive, was 11·52 per cent. in 1826, and the minimum 2·43 per cent, in the years 1830 and 1832; the greatest invaliding was 5·34, in 1831, and the least 0·09, in 1834. The sum of the strength for 20 years was 50,987; the sum of the admission into hospital, 88,720. The total deaths from ordinary causes 2,301 and from cholera 288. The mean per centage deaths from ordinary causes, for 20 years, was 4·51, from cholera, 0·56, and from all causes, 5·07 per cent; the mean invaliding, 3·16 per cent. The mortality and invaliding combined are more than 8 per cent.; so that a regiment would be renewed in about 12 years. Comparing the mortality of the European troops of the three Presidencies, we find that Bengal loses the greatest number from ordinary causes, 6·23, and from cholera 1·15 per cent.,—total, 7·38 per cent.; Madras loses the least from ordinary causes, 3·42 per cent., and from cholera 0·43,—total 3·85 per cent., about the half of that of Bengal. The loss at Bombay, 5·07 per cent., is somewhat more than at Madras. The mean loss of the European troops of all the Presidencies is 4·68 per cent. from ordinary causes, 0·72 per cent. from cholera, and from all causes 5·41 per cent.; the mean invaliding 2·88 per cent.

Table XII. relates to the native army of Bombay. The maximum strength was 49,873, in 1844; the minimum, 25,782, in 1833. The maximum admissions into hospital was 49,418, in 1844, from a strength of 49,873; so that on the average nearly every soldier passed through the hospital, a most unusual circumstance for the Native army; and



this characterizes the returns for 1839, the year the Bombay troops occupied Scinde. The minimum of admissions was 20,652, in 1833, from a strength of 25,782. The greatest absolute number of deaths, exclusive of the mortality of the troops in Scinde, which is not given for the years 1842, 1843, and 1844, from ordinary causes was 595 in 1844 or 1·19 per cent.; but this does not give the greatest per centage of deaths, which with 536 absolute deaths in 1839, gave a per centage of 1·87; the minimum of deaths was 111, in 1843, not including the deaths in Scinde. The greatest number of deaths from cholera was 237, in 1825, and the next year had the next greatest number, 183. Indeed, these two years appear to have been peculiarly fatal throughout India, for Europeans and Natives, both in ordinary diseases and cholera. The maximum invaliding was 2,507, in 1830, giving the maximum per centage, 8·08 for 20 years; the smallest number was 448, in the next year. The maximum per centage of deaths from ordinary causes was 1·87, in 1839, and least, 0·35 per cent. The maximum from cholera was, at the worst, little more than a half per cent., 0·58 in 1825, and the least was 0·007, in 1836, there being only two deaths in the whole army of 28,438 men. The maximum per centage of deaths, cholera inclusive, was 2·38, in 1839; but, with this exception, the two next greatest maxima were in the years 1825 and 1826. The minimum was 0·69 per cent., in 1843 for a part of the army. The sum of the strength was 638,978; the sum of admissions into hospital 586,047. The total number of deaths from ordinary causes, 6,455; from cholera, 1,796; the invaliding, 21,155. The mean per centage of deaths from ordinary causes, for 20 years, was 1·01 per cent.; from cholera, 0·28; and deaths inclusive of cholera, 1·29 per cent.; mean invaliding, 3·31 per cent.

Comparing the mortality of the Native troops of the different armies, we find that those of Bombay not serving in Scinde, suffer least from ordinary causes, 1·01 per cent., while those of Bengal and Madras lose respectively 1·57 and 1·51 per cent. With respect to cholera, Bengal suffers least with the Native troops, 0·22, though most with the European, 1·15 per cent. Bombay loses only 0·28 per cent. from cholera, while Madras loses more than double, 0·58. In the mortality from all causes, inclusive of cholera, Bombay suffers least, 1·29 per cent.; Madras most, 2·09 per cent.; and Bengal is intermediate, 1·79 per cent. The invaliding is greatest in Bombay, 3·31, and least in Bengal, 1·50 per cent. The mean mortality for 20 years, for all the Native troops of India, from ordinary causes, is 1·46 per cent.; from cholera, 0·34; and cholera inclusive, it is 1·80 per cent. The mean invaliding for all the Native troops of India is 1·93 per cent.

I have now terminated the review of the sickness, mortality, and invaliding of the East India Company's European and Native troops in India, for 20 years, and shall reserve some general observations upon the tables for the close of the third portion of this paper.

TABLE VII.—Bengal Presidency. EUROPEANS.

Year.	Average Strength.	Admis- sions into Hospital during the Year.	Deaths from or- dinary Causes.	Deaths by Cholera.	In- valided.	Ratio per cent. of Ordinary Deaths to Strength.	Ratio per cent. of Deaths by Cholera to Strength.	Ratio per cent. of Deaths generally to Strength.	Ratio per cent. of Number Invalidated to Strength.
1825	4,512	9,378	539	25	167	11·94½	0·55½	12·50	3·7
1826	4,357	6,863	265	23	295	6·08	0·53	6·60	6·7
1827	3,793	927	291	34	248	7·66½	0·90	8·56½	6·5
1828	4,177	7,706	226	26	217	5·41	0·62	6·03	5·2
1829	4,466	9,022	201	29	205	4·50¼	0·65¾	5·16	4·6
1830	4,550	8,499	239	42	202	5·25	0·24	6·19	4·4
1831	4,757	7,064	274	38	154	5·75¾	0·80	6·55¾	3·2
1832	4,342	7,066	228	47	108	5·25	1·08	6·83	2·4
1833	4,220	6,979	272	51	85	6·44¾	1·20¾	7·65½	2·0
1834	3,806	8,738	285	63	76	7·48¾	1·65½	9·14¼	2·0
1835	4,084	7,589	270	48	70	6·61	1·17½	7·78½	1·7
1836	4,259	7,526	210	43	89	4·93	1·01	5·94	2·0
1837	4,324	6,171	216	39	129	4·99½	0·90	5·89½	3·0
1838	4,303	8,514	281	75	148	6·53	1·74¼	8·27¼	3·4
1839	4,098	6,449	254	65	113	6·19¾	1·58½	7·78¾	2·7
1840	4,754	9,776	286	51	236	6·01½	1·07¼	7·08¾	5·0
1841	4,751	11,202	287	81	220	6·04	1·28¼	7·32¼	4·6
1842	4,777	10,423	298	47	147	6·23¾	0·98¼	7·22	3·0
1843	5,016	9,339	298	107	166	5·94	2·13	8·07	3·3
1844	5,034	8,929	290	87	152	5·76	1·72¾	7·48¾	3·0
	88,380	158,160	5,510	1,021	3,227	6·23	1·15	7·38	3·6

TABLE VIII.—NATIVES. Bengal.

Year.	Average Strength.	Admissions into Hos- pital during the Year.	Deaths from Or- dinary Causes.	Deaths by Cho- lera.	In- valided.	Ratio per cent. of Ordinary Deaths to Strength.	Ratio per cent. of Deaths by Cholera to Strength.	Ratio per cent. of Deaths generally to Strength.	Ratio per cent. of Number Invalidated to Strength.
1825	152,843	33,191	2,651	216	938	1·73	0·14	1·87	0·6
1826	148,399	56,753	1,745	189	954	1·18	0·12	1·30	0·6
1827	130,313	30,903	1,643	137	847	1·26	0·10	1·36	0·6
1828	119,797	51,425	1,742	199	2,259	1·45½	0·16½	1·62	1·8
1829	106,352	40,385	1,622	156	5,070	1·52	0·14	1·67	4·7
1830	93,520	47,138	1,668	236	3,445	1·78¼	0·25¼	2·03½	3·6
1831	83,748	39,455	1,535	181	1,413	1·83¼	0·02¾	2·05	1·6
1832	78,846	46,622	1,315	232	1,323	1·66½	0·29½	1·96	1·6
1833	79,703	38,183	1,639	259	1,049	2·05½	0·32½	2·38	1·3
1834	79,033	63,805	1,887	242	2,048	2·38¾	0·30½	2·69¼	2·5
1835	79,042	53,584	1,244	217	594	1·57	0·27½	1·84½	0·7
1836	79,932	34,116	1,430	223	922	1·78¾	0·27¾	2·06½	1·1
1837	80,834	39,626	950	189	945	1·17½	0·23¼	1·40¾	1·1
1838	82,819	46,354	1,682	187	1,178	2·03	0·22½	2·25½	1·4
1839	94,365	42,632	1,893	249	802	2·00½	0·26¼	2·26¾	0·8
1840	102,257	76,917	1,193	136	1,338	1·16½	0·12¼	1·29¾	1·3
1841	105,783	73,636	1,411	291	1,169	1·33¾	0·27½	1·60¾	1·1
1842	113,020	98,936	1,897	259	1,256	1·66¾	0·22¾	1·89½	1·1
1843	114,728	95,323	1,605	361	1,438	1·04	0·31¼	1·71¼	1·2
1844	121,091	91,751	1,418	329	1,455	1·17	0·27	1·44	1·2
	2,046,425	1,100,735	32,170	4,488	30,443	1·57	0·22	1·79	1·5



TABLE IX.—*Madras Presidency.* EUROPEANS.

Years.	Average Strength.	Admissions into Hospital during the Year.	Deaths from Ordinary Causes.	Deaths by Cholera.	In-validated.	Ratio per cent. of Ordinary Deaths to Strength.	Ratio per cent. of Deaths by Cholera to Strength.	Ratio per cent. of Deaths generally to Strength.	Ratio per cent. of Number Invalided to Strength.
1825	4,350	7,842	455	60	108	10.459	1.379	11.839	2.482
1826	4,548	7,105	321	11	159	7.058	0.241	7.299	3.473
1827	4,982	8,035	257	6	97	5.158	0.120	5.279	1.947
1828	5,216	7,449	229	13	34	4.390	0.249	4.639	0.651
1829	5,007	7,481	152	3	114	3.035	0.059	3.095	2.276
1830	5,265	6,300	140	32	124	2.659	0.607	3.266	2.355
1831	5,325	5,786	198	41	120	3.718	0.769	4.488	2.253
1832	5,019	5,234	141	39	76	2.809	0.777	3.586	1.514
1833	4,739	7,288	167	48	81	3.523	1.012	4.536	1.709
1834	4,481	8,134	158	2	85	3.525	0.044	3.570	1.896
1835	4,749	6,991	100	1	84	2.105	0.021	2.126	1.768
1836	4,574	5,777	108	1	95	2.361	0.021	2.383	2.076
1837	4,645	5,363	148	19	122	3.186	0.409	3.595	2.626
1838	4,901	5,371	97	7	69	1.979	0.142	2.122	1.407
1839	4,696	5,332	102	27	126	2.172	0.574	2.747	2.683
1840	5,045	7,590	139	26	134	2.755	0.515	3.270	2.656
1841	5,785	8,002	145	5	132	2.506	0.086	2.592	2.281
1842	6,083	8,099	160	41	130	2.630	0.674	3.304	2.137
1843	5,917	6,806	127	13	121	2.146	0.219	2.366	2.044
1844	5,883	5,744	116	37	90	1.971	0.628	2.600	1.529
	101,210	135,720	3,460	432	2,101	3.419	0.427	3.846	2.076

TABLE X.—NATIVE TROOPS. *Madras.*

Years	Average Strength.	Admissions into Hospital during the Year.	Deaths from Ordinary Causes.	Deaths by Cholera.	In-validated.	Ratio per cent. of Ordinary Deaths to Strength.	Ratio per cent. of Deaths by Cholera to Strength.	Ratio per cent. of Deaths generally to Strength.	Ratio per cent. of Number Invalided to Strength.
1825	61,947	73,273	1,897	792	2,183	3.062	1.278	4.340	3.362
1826	71,488	71,637	1,801	294	2,066	2.519	0.411	2.930	2.887
1827	69,055	53,043	1,079	283	658	1.562	0.409	1.972	0.952
1828	64,396	40,848	761	368	1,499	1.181	0.571	1.753	2.327
1829	59,853	32,982	628	213	970	1.049	0.355	1.405	1.620
1830	56,715	30,745	583	126	1,212	1.027	0.222	1.250	2.137
1831	50,417	29,646	540	271	1,153	1.071	0.537	1.608	2.306
1832	58,450	33,451	636	333	668	1.088	0.569	1.657	1.142
1833	49,640	35,915	775	579	669	1.561	1.166	2.727	1.347
1834	49,568	47,504	968	58	334	1.952	0.117	2.069	0.673
1835	49,075	42,007	721	2	836	1.469	0.004	1.473	1.703
1836	48,726	52,302	1,206	27	342	2.475	0.055	2.530	0.701
1837	48,571	36,793	698	351	1,220	1.437	0.722	2.159	2.511
1838	48,930	37,490	710	502	1,427	1.451	1.025	2.477	2.916
1839	51,776	43,712	656	249	1,305	1.266	0.480	1.746	2.524
1840	60,709	45,451	687	122	1,684	1.131	0.200	1.332	2.773
1841	63,556	48,247	813	241	1,112	1.279	0.379	1.658	1.749
1842	63,571	53,172	1,146	741	1,841	1.802	1.165	2.968	2.738
1843	65,335	47,508	844	905	1,536	1.291	1.385	2.676	2.350
1844	64,482	48,599	939	519	764	1.456	0.804	2.261	1.184
	1,196,260	904,325	18,088	6,976	23,479	1.512	0.583	2.095	1.963

TABLE XI.

Return to an Order of the House of Commons, dated 16th June, 1845, showing the Sickness, Mortality, and Invaliding, in the Hon. East India Company's Troops, (Natives and Europeans,) in the Bombay Presidency, from the Year 1825 to 1844 inclusive.

EUROPEANS. *Bombay.*

Bombay, 17th July, 1846.

Years.	Average Strength.	Admission into Hospitals during the Year.	Deaths from Ordinary Causes.	Deaths from Cholera.	In-valids.	Ratio per cent. of Ordinary Deaths to Strength.	Ratio per cent. of Cholera Deaths to Strength.	Ratio per cent. of Deaths generally to Strength.	Ratio per cent. of Number Invalidated.
1825	1,928	2,363	88	1	56	4.564	.052	4.616	2.904
1826	1,727	4,764	179	20	55	10.364	1.158	11.522	3.184
1827	1,895	4,977	134	5	91	7.071	.264	7.335	4.802
1828	2,227	6,178	147	13	113	6.600	.584	7.184	5.072
1829	2,216	5,448	105	1	118	4.738	0.45	4.783	5.324
1830	2,576	4,201	62	2	85	2.407	0.77	2.484	3.299
1831	2,243	4,287	75	4	120	3.344	.178	3.522	5.349
1832	2,424	5,451	46	13	35	1.897	.536	2.433	1.443
1833	2,285	5,411	68	8	103	2.976	.350	3.326	4.507
1834	2,151	4,719	74	2	2	3.440	.093	3.533	0.097
1835	1,990	4,716	92	0	82	4.623	0	4.623	4.120
1836	1,907	4,891	59	1	19	3.093	.053	3.146	0.996
1837	1,861	5,530	101	12	91	5.428	.644	6.072	4.889
1838	2,266	4,425	87	7	40	3.839	.309	4.148	1.765
1839	2,043	3,157	134	31	60	6.559	1.517	8.076	2.936
1840	2,374	3,606	128	24	62	5.392	1.010	6.402	2.610
1841	3,479	1,284	91	4	77	2.615	.115	2.730	2.213
1842	4,706	2,039	165	90	121	3.506	1.912	5.418	2.571
1843	5,022	4,007	270	2	201	5.376	.039	5.415	4.002
1844	3,667	6,266	196	48	80	5.344	1.309	6.653	2.181
Total....	50,987	88,720	2,301	288	1,611	4.513	.565	5.078	3.160
Bombay	50,987	88,720	2,301	288	1,611	4.513	.565	5.078	3.160
Bengal.	88,380	158,160	5,510	1,021	3,227	6.23	1.15	7.38	3.6
Madras	101,210	135,720	3,460	432	2,101	3.419	0.427	3.846	2.076
	240,577	382,600	11,271	1,741	6,939	4.685	.724	5.409	2.884



TABLE XII.

NATIVES. *Bombay.*

Years.	Average Strength.	Admission into Hospital during the Year.	Deaths from Ordinary Causes.	Deaths from Cholera.	Invalids	Ratio per cent. of Ordinary Deaths to Strength.	Ratio per cent. of Deaths by Cholera to Strength.	Ratio per cent. of Deaths generally to Strength.	Ratio of Number Invalided
1825	40,711	39,041	485	237	556	1·191	·582	1·773	1·365
1826	39,410	37,161	542	183	740	1·339	·464	1·803	1·877
1827	39,090	30,673	476	33	862	1·218	·084	1·302	2·205
1828	37,692	28,460	325	85	1,465	·862	·225	1·087	3·886
1829	33,250	32,617	316	21	1,852	·950	·063	1·013	5·569
1830	31,004	28,537	339	112	2,507	1·093	·361	1·454	8·086
1831	31,178	27,300	197	46	448	·632	·147	·779	1·436
1832	28,681	23,271	175	63	998	·610	·219	·829	3·482
1833	25,782	20,652	142	116	714	·551	·449	1·000	2·769
1834	26,730	24,350	125	96	1,381	·467	·359	·826	5·166
1835	28,694	25,721	296	28	862	1·032	·097	1·129	3·004
1836	28,438	24,223	275	2	1,150	·967	·007	·974	4·043
1837	28,242	21,838	226	113	790	·800	·400	1·200	2·796
1838	26,158	22,675	276	12	984	1·055	·477	1·532	3·762
1839	28,677	30,104	536	148	687	1·869	·516	2·385	2·395
1840	26,464	29,956	343	131	826	1·296	·495	1·791	3·257
1841	30,659	31,035	373	24	782	1·216	·078	1·294	2·550
*1842	26,417	30,465	302	158	1,224	1·143	·598	1·741	4·633
*1843	31,835	28,550	111	109	1,435	·349	·342	·691	4·507
*1844	49,873	49,418	595	79	892	1·193	·158	1·351	1·788
Total....	638,975	586,047	6,455	1,796	21,155	1·010	·281	1·291	3·311
Bombay	638,975	586,047	6,455	1,796	21,155	1·010	·281	1·291	3·311
Bengal	2,046,425	1,100,725	32,170	4,488	30,443	1·57	·22	1·79	1·5
Madras	1,196,260	904,325	18,088	6,976	23,479	1·512	·583	2·095	1·963
	3,881,660	2,591,107	56,713	13,260	75,077	1·461	·342	1·803	1·934

\* The returns of the sickness and mortality of the troops in Scinde incomplete for these years.

*Pension Establishments.*

The third portion of this paper contains statements of the transfers to, and casualties on, the Invalid Pension Establishments; of the average length of service before transfer; average age at the time of decease, and number of years each grade remained on the Pension List, for the years 1843-4 and 1844-5, for Bengal, and for Madras for the years 1842-3 and 1843-4. The returns from Bombay have not yet been received. These returns confirm in a remarkable manner the general healthiness of Natives serving in the army in India, and as such are efficient auxiliaries to the deductions respecting the value of life furnished by the mortality returns of the effective troops.

The headings of the columns are :—Number of Transfers,—Average Service before Transfer,—Number of Casualties,—Rate per Cent. of Casualties on the whole Establishment,—Average Age at the time of Decease,—and, finally, Average number of Years in the Pension Establishment. And every rank on the Pension List, from the subedar, or Native captain, down to the groom and the grasscutter, come under these several headings. The tables are worthy of careful inspection; but I must confine myself to a few broad features in illustration of them. The total number of transfers, of all ranks, to the Pension establishments in 1843-4, in Bengal (Table XIII.) was 1,340, and in 1844-5 the number was 1,583; in the former year, 78 subedars or Native captains, in the latter 126; the average period of service before pensioning of these officers being 43 years and 5 months and 41 years and 11 months respectively. The number that died in 1843-4, out of the whole number of subedars, was 79, and in 1844-5 it was 70, and the average age of these parties at the time of their death was  $72\frac{11}{12}$  years and  $69\frac{1}{6}$  years respectively, and they had averaged  $13\frac{5}{12}$  and  $12\frac{1}{6}$  years respectively on the Pension List before decease. Details are given for the several ranks, ten in number, into which I will not enter; it will suffice to say, that the sepoy, or common soldier, in 1844-5 averaged about 20 years service before invaliding (the non-commissioned ranks much longer), the average age at the time of decease being  $52\frac{5}{6}$  years, having been  $11\frac{1}{4}$  years on the Pension List. The average per centage casualties on the whole Pension establishment for 1843-4 was 4·29 per cent., and for 1844-5 it was 3·57 per cent. A continuation of the return gives the total numbers on the Pension establishment, the Family Pension establishment and the Wound Pension establishment, of every rank, remaining on the 30th April of each year, together with the casualties, &c., during the year. The total number on the Invalid Pension establishment, of all ranks, on the 30th April, 1844, was 24,643; on the Family Pension establishment, 5,526; and on the Wound Pension establishment, 250. On the 30th April, 1845, the numbers on these several establishments were respectively 25,289, 8,116, and 338.

The annual expense of the Native pensioners in Bengal was in

	Rupees.		£
1840-41 .....	18,35,548	or .....	183,554
1841-42 .....	18,89,045	„ .....	188,904
1842-43 .....	17,92,462	„ .....	179,246
1843-44 .....	19,26,380	„ .....	192,680
1844-45 .....	20,04,120	„ .....	200,412



The Madras return of the Pension establishment of the Madras army is of a similar character with the preceding, but it is for the years 1842-3 and 1843-4. The number of deaths of subedars in those years was 51 and 50 respectively; having served previously to invaliding  $37\frac{1}{2}$  years, their average ages at the time of death being  $62\frac{1}{4}$  and 68 for the several years, and having been on the Pension List  $10\frac{1}{4}$  and  $11\frac{1}{4}$  years before death. The average per centage of annual deaths of the whole Pension List for the years 1842-3 and 1843-4 was 5.87 and 5.71 respectively; showing, as in the mortality of the effective troops, a considerable increase over the mortality of the Native troops of the Bengal and Bombay armies. The average period of service of the sepoy before his transfer to the Pension establishment, would appear to be 23 years and  $3\frac{1}{2}$  months for 1843-4; the average age of 778 deaths for this year was 56 years; but for the preceding year it is stated to be 73 years of 774 deaths—probably a graphical error.

The number of military pensioners, of all classes, in 1843-4 was 26,241, and the charge for them 18,75,457 rupees, or £187,545 sterling. In 1844-5 the number was 26,902, and the charge 18,98,066 rupees, or £189,806. On the 30th April, 1845, the number was 27,959, and the charge 20,45,449 rupees, or £204,549. The progress from the years 1834-5 has been from 23,900 pensioners, at a charge of 17,93,158 rupees, or £179,315 to the number and charge above stated in 1845.

I here conclude my brief notices of the leading features of the tables constituting the three divisions of my subject; and I may be allowed to remark that the production of such elaborate documents as those I have handled indicates no ordinary efficiency in the departments in India whence they emanate.

I now venture upon some reflections, suggested by the tabular statements. I am so much of an utilitarian, that I am disposed to view labour, both mental and physical, that has not some practical object—some definite view—some proximate or remote applicability to the use of the community or to individuals—as labour lost, or, at the least, misapplied; and now, on the conclusion of my toils, I am induced to exclaim, as I have done on former occasions, “*Cui bono?*” Happily the question can be answered satisfactorily. Independently of the mass of important facts which the official returns embody, the Vital Statistics of the Bombay army at each year of life, from 20 to 52, will occasion a complete revolution in opinion with respect to the value of Native life in India, and give to the life insurer positive data for the calculation of tables of the value of life; which tables may justify the introduction of the important system of life insurance, at very low premiums, amongst the Natives of India, a system existing, I believe, almost unheeded and scarcely acted upon, or if acted upon, only to an exceedingly limited extent, from the ignorance of the value of Native life occasioning the exaction of high premiums. If, therefore, the publication and diffusion of these mortality returns should occasion an extension of the system of life assurance amongst the Natives, it would confer a blessing upon that portion of the community who have their salaries only as servants of the State, or of mercantile establishments, as a means of support and of providing for their families. With respect to the mortality of the Bombay army,

it is observed that the deaths amongst the troops serving in Scinde is double that of the troops not serving in Scinde. Nevertheless, in spite of this disadvantageous circumstance, the mortality is remarkably small for the tropics, as compared with that of similar ages in Europe.

According to Mr. Neison's and other tables annexed (Tables XVIII. to XXI.) it would appear that an examination of the gross mortality in England and Wales, between the ages of 21 and 52, as recorded in the first column of Table XVIII., shows that it is coincident with the specific mortality at age 39; and assuming that such will be the case in the other tables referred to in this paper, we are led to the following conclusion: that during the three years 1842, 1843, and 1844, the mortality of the whole Bombay Native army, including that in Scinde, was 2·729 per cent., being somewhat greater than that for the city of Glasgow at age 39, which is 2·413 per cent. Again, the mortality of that portion of the Bombay army, which had been in Scinde, being 4·333 per cent., is more than double the mortality of the Northampton Table, but not quite double that of the city of Glasgow at the same ages. But if the mortality of that portion of the army which had not been in Scinde during those three years be taken, it will be found to be only 1·974 per cent., being nearly coincident with the mortality for France, and below that of the Northampton Table or the city of Glasgow. In connexion with this conclusion, however, it is necessary to take into view another fact. In the two years 1842-3 the following six regiments were in Scinde, but were not there during the year 1844\*. During the latter year the mean strength of these regiments was 5,557, and the deaths 238, or 4·283 per cent., differing very little from the average mortality of the regiments in Scinde. It is thus seen that the mortality of the Native army said to be out of Scinde is increased from including regiments just returned from that province; and hence it follows, that in order to arrive at the true mortality of the Native army of Bombay, exclusive of those in Scinde, some correction will be necessary. During the year 1844 the average strength of the regiments actually out of Scinde was 25·265, and the deaths 566, or about 2·248 per cent. If from this be deducted the six regiments returned from Scinde in the year preceding, the mean strength of the residue will be 19,708, the deaths 328, giving a reduced mortality of 1·664 per cent. So that the influence of those regiments just returned from Scinde was to increase the rate of mortality during the year 1844, ·584 per cent. I am not possessed of the information at this moment to show what regiments in the year 1842 had returned from Scinde during the preceding year, but if it be allowed that other years will be similarly affected as the above, in order to determine the true mortality of those regiments which have never entered Scinde, it will be necessary to deduct from the results of Table V. ·584 per cent. If this be done, the mortality of the Bombay Native army will be only 1·390 per cent.; approaching nearly to the mortality for Ireland and Sweden; not widely different from the mortality for the male population of England and Wales, and under the mortality of Dundee, France, the Northampton Table, and the city of Glasgow. This most important and interesting result

\* 3rd Regt. Light Cavalry, 1st or Grenadier Regt., 6th, 15th 20th, and 21st, Regts., N. I.



deduced from the mortality at specific ages during the years 1842, 1843, and 1844, is confirmed by the gross mortality over a period of twenty years, as already alluded to, and from which it appears that the mortality in that period was not more than 1·291 per cent.

Consequent upon the preceding deductions the Tables XIX., XX., and XXI., will give a comparative view of the value of life in the various sections of the Bombay Native army for the three years 1842, 1843, and 1844, and the whole male population of England and Wales and the city of Glasgow. The first portion of the table represents the equation of life at various ages, or the term of years for which there is an equal probability of surviving. It will be found (Table XIX.) that at age 21 the expression is 24·534 years for the whole army; for that portion in Scinde only 16·477 years; but for the residue or that section which had not been in Scinde during those three years, it is 30·697 years; while for the city of Glasgow it is 29·423, being upwards of *one year and a quarter* in favour of the Native army. The same expression for the male population of England and Wales is 43·410 years.

Again, the Table XX. shows the equation of life, for which the probability of surviving is *two to one*, and at age 30 it will be seen to be 14·307 for the whole army, only 9·484 for Scinde, and for the residue as much as 18·247 years. The same term for Glasgow is 16·969 years, and for England and Wales 27·699.

Table XXI. affords a further illustration of the same sort, and represents the term of years for which the probability of surviving is *three to one*. At age 40 it will be seen to be 9·058 for the whole army, only 5·728 for Scinde, but 10·653 for the part of the army out of Scinde. For Glasgow the expression is 9·591, and the whole male population of England and Wales 17·375 years.

It thus appears that over those ages the value of life of the army in Scinde is only about one-half of that out of it, and also that the value of life in Glasgow is also less than in the portion of the army out of Scinde.

This method of representing the relative value of life confirms the results arrived at by the other tests already given.

Another important result from the compilation of this paper is the necessary removal of all rational grounds for that panic terror which has hitherto obtained respecting the intensity and extent of that assuredly very shocking malady Asiatic cholera. In consequence of the unexpectedness with which the disease appears in certain localities, the devastation it commits, sparing neither age nor sex, the robust nor the feeble, the daring nor the timid; the unthinking and the alarmist are led to characterize these local manifestations as types of the general operation of this appalling disease; but when we calmly cast our eyes over the mortality tables of the whole Indian army, whose annual average strength for twenty years was 12,028 Europeans and 194,082 Natives, we find that the annual average loss from cholera for twenty years was—

Europeans.		Natives.	
Bengal .....	51	Bengal .....	224
Madras .....	22	Madras .....	348
Bombay .....	14	Bombay .....	90
Total for India....		Total for India....	
87		662	

The European troops losing, in fact, only 0·724 per cent. per annum, and the Native troops only 0·342 per cent. per annum. The maximum intensity of the cholera was only 2·13 per cent. in 1843 in twenty years; and amongst the Native soldiery during that period the maximum intensity scarcely exceeded the half of that amount. And yet the recent shocking details from one locality in Scinde (Kurrachee) struck the public mind in India and Europe with amazement and horror; and such impressions would be justifiable were unhappily these visitations to be of frequent or extended occurrence; but the preceding tables prove the contrary, and relieve us from our terrors.

Another fallacy which these tables dissipate is the asserted superiority of the European over the Native soldier in resisting the influence of cholera in the first instance, and in the power of rallying from its effects when attacked. The European it is said is a robuster man than a Native; his fibre is more rigid, and his stamina stronger; the Native being comparatively feeble and washy from his habits of life, and from the insufficient nourishment of his farinaceous or vegetable food. Now the tables show the very reverse to be the case. In no year whatever under the Bengal Presidency has the per centage rate of mortality from cholera of the Native troops approached that of the Europeans; nearly the same may be said of the Bombay cholera mortality. At Madras there is a difference, the mean mortality of the Natives from cholera being rather more than a half per cent. per annum, and that of the Europeans a trifle less than a half per cent. This I shall endeavour to account for when speaking of the probable causes operating upon the health of the troops of the three Presidencies, European and Native. The final results of cholera mortality as already shown are, for the European troops of all India, 0·724 per cent.; and for the Natives, 0·342 per cent. per annum. No doubt the reckless life of the common European in India, and the over stimulus of his animal food and alcoholic beverage, predispose him much more than the Native soldier to all diseases: he is also a much greater sufferer from disease than the European officer; and of this we have sufficient evidence in the Report of Mr. Griffith Davis upon the Bengal Military Fund, in which he shows that the per centage mortality of all ranks of European officers of the Bengal army for eight years, from 1824 to 1832, was 3·77 per cent. for the unmarried (only the half of the European soldier in Bengal); while that of married officers for the same period was only 2·74 per cent.; and that for the European soldier in Bengal, as has been shown, was 7·38 per cent. This different mortality may very fairly be attributed to the more temperate mode of living of the European officers than that of the men; but from whatever cause, it is plainly demonstrated that European soldiers are greater sufferers from cholera than Native soldiers; and this leads me to another great fact illustrated by these tables, namely, the remarkable general health of the Native troops; manifesting, however, distinctive features in the different Native armies of the three Presidencies, to which I shall advert. The per centage mortality of the three Native armies for twenty years is shewn to be: Bombay, 1·291 per cent; Bengal, 1·79 per cent.; and Madras, 2·095 per cent. Now, even the highest of those rates is less than that of the English foot guards 2·16 per cent. (Table XXII.); less than that of the troops at Gibraltar 2·20 per



cent.; less than that of the troops in the Ionian Islands 2·83 per cent.; and less than that of the troops in Canada 2·00 per cent.; but the average mortality of the Bombay army is less than that of any European troops whatever, excepting only the Prussian, which is stated to be only 1·17 per cent.; this low average, however, is understood to be owing to the extreme youth of the men, who have enlisted young, and have only to serve five years. The lowest rates in the British army is: household cavalry, 1·45 per cent.; dragoon guards and dragoons, 1·53 per cent.; and the troops in Ireland and the Cape of Good Hope, both 1·55 per cent. Now to what cause or causes is to be attributed the remarkable discrepancy between the health of the Native and European armies in India? All live under the same climate, are exposed to the same vicissitude of seasons, the same alternations of temperature, and are engaged in the same toils, the European is if anything better lodged in his lofty barracks than the Native in his lowly hut; and is certainly better fed, in the usual acceptation of good feeding, his animal food being daily washed down with grog or beer; while most of the Natives subsist on farinaceous or vegetable matters, washed down with water only. But independently of these contrasts between the health of Europeans and Natives, how are we to account for the singular discrepancy between the health of the European troops serving under the Bengal Presidency and those serving under the Madras Presidency, the mortality of the former being 7·38 per cent., and that of the latter only 3·846 per cent., so that a European regiment in Bengal is renewed in ten years, in Bombay in twelve years, and in Madras in seventeen only? And in contrast to this we find the mortality of the Native army of Madras 2·095 per cent.; that of Bengal 1·79, and that of Bombay only 1·29 per cent. Unquestionably over the vast continent of India there must be and are numerous local physical circumstances, marshes, jungles, insufficient drainage, sandy arid plains, or rank vegetation, to affect the atmosphere of those particular localities, and to operate upon the health of the residents in such places. But this will not meet all the bearings of the broad question. Why is the health of the European troops so universally inferior to that of the Native troops serving with them, whose health, in fact, is superior, or at least equal to that of the European troops in their own land? I will not say that the question is absolutely solved by the reply, "Habits of life;" but I will say, reasoning from analogy, that the reply goes a great way to solve it. The European soldier in India is over-stimulated by food, over-stimulated by drink, and under-stimulated in mind and body. The European soldier eats a quantity of animal food every day of his life; he drinks a quantity of alcohol every day of his life to the amount of a bottle of spirits in five days, two drams being served out to him daily, and he has not any mental, and little bodily exercise. Happily the pernicious practice is recently discontinued, but time was when the European soldier was compelled to take his dram by eight o'clock in the morning, with the thermometer varying from 70° to 90° or more, at different seasons of the year, leaving him in a state of nervous irritation and thirst, which could only be relieved as he thought by further potations; indeed I have been assured within the last few days by a pensioned artillery staff-serjeant, who never drank in India, and was only in hospital five

days during twenty-one years' service, that he has known, out of a detachment of 100 artillery men, no less than eight men in strait-jackets at one time, absolutely mad from drink. Now animal food with the assistance of such an auxiliary, and combined with mental vacuity, go far to account for the excess of mortality amongst Europeans.

With a view to see the bearing of the quality of the supplies of beverage to the European troops I had the following statement of the quantity of beer sent to Madras and Bombay for the use of the European troops prepared.

(N.B. None sent to Bengal.)

		Madras.	Bombay.
1840 .....	Hhds.	500 .....	none.
1842 .....	,,	1,500 .....	none.
1844 .....	,,	2,000 .....	none.
1845 .....	,,	2,000 .....	1,000
1846 .....	,,	1,888 .....	1,300
Under pro- } vision for	1847 .....	980 .....	232

And the spirits\* supplied at each Presidency are—

In Bengal.....	Rum.
At Madras .....	Columbo Arrack.
At Bombay .....	Bhandoop Spirit.

The first features that catch the eye are, that the Bengal Europeans have not any porter sent to them, and that they drink rum, a spirit not so wholesome as arrack. Their mortality is 7·38. The Madras Europeans consume large quantities of porter, and drink arrack, a comparatively wholesome spirit. Their mortality is only 3·846 per cent. The Bombay European troops have only recently commenced the consumption of porter, and the spirit they drink is understood to be more wholesome than rum, but less so than arrack. Their mortality is 5·078 per cent. These results are certainly not conclusive; but I cannot help associating the increased consumption of malt liquor by the Madras Europeans with their comparative healthiness; and the gradations of the mortality in the Bengal and Bombay European troops as partly influenced by the quality (no doubt much more by the quantity) of the spirits they respectively consume.

In contrast to this, let us examine the habits of life of the Native soldier, and we shall find his health in the ratio of his departure from the European system of living. I have been careful to give numerically the castes of the Native troops of the armies of Madras, Bombay, and Bengal, with the exception of the Bengal cavalry, as their habits of life are chiefly regulated by their caste. The Natives of India are generally considered to be very temperate in their habits; but it is quite a mistake to suppose that they all live upon farinaceous or vegetable matters, and do not drink fermented liquors; it is equally a mistake to suppose that the general food of the people is rice, which is only very much the case in low lands subject to inundation, and along the coasts. In the interior, rice is generally so much dearer than the bread grains, of which there are many (wheats, millets, the genera holcus, panicum, paspalum, &c., &c.,) that rice is rarely consumed, at least in Hindoos-

\* 24 degrees below London Proof.



tan and the Deccan. The Hindoostanee soldier lives almost exclusively upon unleavened cakes of wheaten flour, daily baked upon an iron dish, and washed down with water. On the other hand, all Mahomedans, and all low caste Hindoos, are consumers of animal food, spirituous liquors, opium, ganja (hemp water); and many castes of the Shudras, the Mahrattas, for instance, eat mutton and fish, when they can afford to do so; but meat is not essentially necessary to health and strength. Leibeg says, that only those substances can possibly be called nutritious which are capable of conversion into blood; that meat is readily converted into blood; and that farinaceous food has also this nutritious principle in a high degree. The truth of this profound assertion of Leibeg, is established by the food of the great majority of the Native soldiers of the Bombay and Bengal armies. I have shown that  $\frac{6}{8}$ ths of the Bombay army consist of Hindoos, and considerably more than half of the whole army are Hindoostanees. These men never taste meat, fish, or spirituous liquors, but live, I may, from personal observation, venture to say, almost exclusively upon unleavened cakes of wheat or other cerealea, baked upon an iron dish, and eaten as soon as cooked. The mortality of this army for twenty years is 1.29 per cent. per annum. The great majority of the Bengal army (83 per cent.) consists of a similar class of men, and the mortality is only 1.79 per cent. The Madras army in its constituents is the reverse of the other two armies. In the cavalry there are from 6 to 7 Moosulmans to 1 Hindoo, and in the infantry there is 1 Moosulman to every  $1\frac{1}{2}$  to  $1\frac{3}{4}$  Hindoos; but amongst the latter there is a considerable number of low castes, without prejudices about food, and unrestrained by the prejudices of caste; therefore the majority of the Native troops of the Madras army can eat and drink like Europeans, and the mortality returns show us that they suffer from cholera as much as Europeans suffer, and that the mean mortality from all causes is 2.095 per cent., or more than  $\frac{3}{4}$  per cent. beyond that of the Bombay army for 20 years. I never followed a farinaceous or vegetable regimen myself in India, nor do I recommend it to others; but I ate moderately and drank little, and I have a strong conviction that much of European disease in India is traceable to overstimulus, and that the mortality among the European troops will not be lessened until the European soldier is improved in his habits, until he is made to understand that temperance is for the benefit of his body, libraries for the benefit of his mind, exercise for the benefit of his health, and savings' banks for the benefit of his purse. The climate of India is less to blame than individuals; for in case foreigners find the people of a country healthy, they should, to a certain extent, conform to the habits of the natives to be healthy also.

TABLE XIII.—BENGAL PENSION LIST.

Statement of Transfers and Casualties on the Invalid Pension Establishment of the Average Length of Service before Transfer, Average Age at time of Decease, and Number of Years each Grade remained on the Pension Establishment during the Years 1843-44 and 1844-45.

	Number of Transfers.		Average Service before Transfer.						Number of Casualties.		Rate per cent of Casualties on the whole Establishment.		Average Age at time of Decease.		Average Number of Years on the Pension Establishment.	
	1843-44.	1844-45.	1843-44.		1844-45.				1843-44.	1844-45.	1843-44.	1844-45.	1843-44.	1844-45.	1843-44.	1844-45.
Subadars, Ressaldars, &c.....	78	126	Yrs. 43	Mths. 5	Dys. 3	Yrs. 41	Mths. 11	Dys. 20	79	70	4.29		72 11 12	69 1 12	13 5 12	12 1 12
Jemadars, Ressaldars .....	28	19	35	11	8	34	1	0	31	20			63 1 12	57 1 12	10 8 12	12 1 12
Havildars, Duffadars .....	239	354	27	6	5	29	0	0	242	233			61 3 12	60 1 12	13 1 12	13 5 12
Naicks .....	178	129	28	1	2	25	8	18	113	98			63 3 12	53 5 12	16 3 12	12 8 12
Native Doctors, Farrier-Majors, &c. ....	7	8	29	3	2	24	3	3	1	4			70 1 12	66 3 12	13 2 12	10 3 12
Drum-Majors, Drummers, Trumpeters .....	31	30	32	8	1	33	2	8	21	14	3.57		65 3 12	62 1 12	13 1 12	7 3 12
Sepoys, Troopers, Sowars, &c. ....	617	693	16	10	4	19	9	0	459	379			53 3 12	52 5 12	11 3 12	11 1 12
Lascars, Gun and Quarter-Master Tindals .....	15	35	22	0	0	23	3	8	24	14			66 3 12	63 1 12	14 1 12	14 1 12
Ordnance-Drivers, Farriers, Bhiesties .....	43	40	25	9	1	21	9	5	45	23			56	61	11 1 12	10 3 12
Syces, Grasscutters, Workmen .....	104	149	18	4	3	23	7	4	90	82			64 3 12	61 1 12	9 3 12	12 1 12
Total .....	1,340	1,583							1,105	937						

Military Auditor-General's Office,  
28th November, 1846.

(Signed)

E. G. J. CHAMPNEYS, Capt.,  
Deputy Military Auditor-General.



TABLE XIV.—Statement of Military Pensioners of the Bengal Establishment, with Transfers and Casualties during the Years 1844-45.

Remaining 30th April, 1844.	Subadars.	Jemadars.	Havildars.	Duffadars.	Naicks.	Native Doctors.	Farrier-Majors.	Drum-Majors.	Sepoys, &c.	Lascares, Gun & Quarter-Master Tindals.	Ordnance Drivers, Farriers, Bhieshties.	Syces, Grass-cutters, Workmen.	Total.	REMARKS.
Invalid Pension Establishment Corps Line and Local	874	563	4,750	3,351	78	336	11,568	674	435	2,014	24,643	The Transfers to the Invalid Establishment during 1844-45 are more by 243 than in the year 1843-44. The Casualties are less by 168 than those reported in the last year. The total increase on the whole Establishment is 6-46. The rate per cent. of Casualties is 3-57; that of last year was 4-59. The per centage of Transfers is 6-03; that of last year was 5-43.		
Family Pension Establishment	80	75	411	338	8	38	4,146	124	75	231	5,526			
Wound Pension Establishment	..	..	11	15	..	3	189	7	15	10	250			
Transfers to Invalid Pension Establishment from May, 1844, to 30th April, 1845	126	19	354	129	8	30	693	35	40	149	1,583			
Transfers to Family Pension ditto, from ditto to ditto ..	36	34	171	151	7	17	2,117	25	17	121	2,696			
Transfers to Wound Pension ditto, from ditto to ditto ..	2	..	5	2	..	..	71	3	1	4	88			
Casualties in Invalid Pension Establishment, from May, 1844 to April, 1845 ....	70	20	233	98	4	14	379	14	23	82	937			
Casualties in Invalid Pension ditto, from ditto to ditto ..	3	1	6	6	..	2	85	..	1	2	106			
Wound Pension Establishment, from ditto to ditto ..	..	..	..	..	..	..	..	..	..	..	..	The Transfers to the Family Pension Establishment are less by 298 than those shown in the last statement. The Casualties in the year 1844-45 exceed those of 1843-44 by 30. The rate per cent. of Casualties is 1-28; that of 1843-44 being 1-03. The rate per cent. of Transfers is 32-79. N.B.—The heirs of men of the Volunteer Regiment who died on Foreign Service in China, whose pensions are chargeable to Her Majesty's Government, viz., 4 Subadars, 2 Jemadars, 33 Havildars, 14 Naicks, 3 Drummers, 346 Sepoys, 2 Lascares, 2 Bhieshties, in all 406 individuals, are included in the total of this Establishment.		
Remaining 30th April, 1845.	930	562	4,871	3,382	82	352	11,882	695	452	2,081	25,289			
Invalid Pension Establishment Corps Line and Local	113	108	576	483	15	53	6,178	149	91	350	8,116			
Family Pension Establishment	..	..	16	17	..	3	260	10	16	14	338			
Wound Pension Establishment	2	..	..	..	..	..	..	..	..	..	..	The number borne on the Wound Pension Establishment has increased from 250 to 338. NOTE.—6 Havildars, 6 Naicks, 1 Drummer, 16 Sepoys, and 1 Syce, (= 30 men,) in receipt of both Invalid and Wound Pensions, are included in the totals of each Establishment.		

Military Auditor-General's Office,  
28th November, 1846.

(True Copies.)

(Signed)

(Signed)

E. G. J. CHAMPNEYS, Captain,  
Deputy Military Auditor-General.

W. M. N. STURT, Major,

Officiating Secretary to the Government of India,  
in the Military Department.

TABLE XV.

Statement of Transfer and Casualties in the Pension Establishment, of the Average Length of Service, before Transfer, Average Age at Time of Decese, and Number of Years each Grade remained on the Establishment during the Years 1842, 1843, and 1844.

	Number of Transfers.		Average Service before Transfer.		Number of Casualties.		Rate per Cent. of Casualties on the whole Establishment.		Average Age at time of Decese.		Average Number of Years on the Pension Establishment.		REMARKS.
	1842-43.	1843-44.	1843-44.		1842-43.	1843-44.	1842-43.	1843-44.	1842-43.	1843-44.	1842-43.	1843-44.	
			Yrs.	Mths.	Dys.								
Subadars .....	58	71	37	6	5	51	50	5·87*5·71*	62½	68	10½	11½	The transfer during the years 1843-44, show an increase of 70 than those of the year 1842-43. The casualties in the year 1843-44 are less by 21 than those of the year 1842-43. The total increase of pensioners on the Establishment in the years 1843-44 is 259. The rate per cent. of transfer on the Establishment in the year 1842-43 is 7·15, and that in the year 1843-44 is 7·44. The rate per cent. of casualties on the Establishment in 1842-43 is 5·87, and in 1843-44 is 5·71.
Jemadars .....	20	8	32	8	18¾	24	13		55	64½	8	11½	
Havildars .....	175	155	28	1	21	153	178		47	62	8	13	
Naicks .....	83	99	23	9	2	70	71		50	58½	8	13	
Drummers .....	39	18	26	4	20	43	32		62	57½	12	12½	
Puckallies .....	11	11	26	6	0	15	12		57½	65	11½	15	
Privates .....	933	1,015	23	3	15	774	778		73†	56	12	12½	
Syrangs, Tindals, Lascars, Dooly Bearers, Artificers, Drivers, &c. ....	83	91	25	10	20	91	78		69½	62½	14½	9½	
Apothecaries and Dressers.....	5	9	22	7	20	18	6		74¾	60½	14¾	13½	
Total.....	1,407	1,477				1,239	1,218						

\* The columns "Rate per Cent. of Casualties on the whole Establishment" of this Statement, is filled up with reference to the number of Pensioners in the 2nd, 3rd, and 4th Class, as per Annual Return, No. 3, furnished to Government, under date the 10th August, 1844—amounting in the years 1842-43 to 19,837; and in 1843-44 to 20,096.

† A graphical error.

Fort Saint George Pension Office,  
29th October, 1845.

(Signed) ROBERT THORPE, Major,  
Superintendent of Pensions.



TABLE XVI,

*Table of the Actual Numbers Living at Each Age in the Bombay Army on the 1st day of January in the following Years.*

	Age next Birthday.	1842.		1843.		1844.		Total.		1845.	
		Living.	Deaths.	Living.	Deaths.	Living.	Deaths.	Living.	Deaths.	Living.	Deaths.
Population, Jan. 1st, 1842 = 31,472	21	5,466	199	6,417	192	5,863	149	17,746	540	6,246	..
" " " " " " " "	22	3,104	84	2,832	67	2,836	45	8,772	196	3,083	..
" " " " " " " "	23	2,862	82	3,089	70	2,963	50	8,914	202	3,133	..
" " " " " " " "	24	2,272	74	2,642	72	2,949	71	7,863	217	2,763	..
" " " " " " " "	25	1,875	66	2,090	70	2,492	42	6,367	178	2,239	..
" " " " " " " "	26	1,316	45	1,595	52	1,855	24	4,766	121	1,675	..
" " " " " " " "	27	955	29	1,128	28	1,540	33	3,623	95	1,273	..
" " " " " " " "	28	585	39	778	23	973	28	2,336	90	821	..
" " " " " " " "	29	503	12	582	24	688	16	1,728	52	607	..
" " " " " " " "	30	417	19	418	12	514	17	1,349	48	473	..
" " " " " " " "	31	404	9	354	8	343	8	1,101	25	388	..
" " " " " " " "	32	603	13	418	12	365	4	1,326	29	466	..
" " " " " " " "	33	842	21	541	11	372	10	1,755	42	616	..
" " " " " " " "	34	1,004	32	735	17	476	8	2,215	57	778	..
" " " " " " " "	35	1,141	46	1,064	18	795	25	3,003	89	1,055	..
" " " " " " " "	36	1,062	34	967	26	881	20	2,910	80	1,024	..
" " " " " " " "	37	958	26	1,080	28	911	12	2,949	66	1,036	..
" " " " " " " "	38	952	35	835	14	923	34	2,710	83	952	..
" " " " " " " "	39	782	29	754	10	689	31	2,225	60	782	..
" " " " " " " "	40	645	35	772	20	689	18	2,121	73	745	..
" " " " " " " "	41	564	11	523	13	649	10	1,786	39	611	..
" " " " " " " "	42	581	14	465	12	418	14	1,464	40	514	..
" " " " " " " "	43	516	26	522	12	397	15	1,435	51	504	..
" " " " " " " "	44	364	20	419	10	490	11	1,203	38	423	..
" " " " " " " "	45	347	18	341	9	369	10	1,057	37	371	..
" " " " " " " "	46	280	11	285	7	271	6	836	24	294	..
" " " " " " " "	47	286	12	232	7	218	7	686	26	242	..
" " " " " " " "	48	179	5	232	7	213	11	624	23	219	..
" " " " " " " "	49	165	4	184	6	130	2	479	12	168	..
" " " " " " " "	50	142	8	128	4	92	1	362	13	127	..
" " " " " " " "	51	92	6	99	2	72	2	263	10	92	..
" " " " " " " "	52	250	6	256	8	233	3	739	17	260	..
		31,472	1,070	32,727	871	32,464	732	96,663	2,573	33,970	

TABLE XVII.  
*Decrements of Indian Army.*

Ages.	Total.		In Scinde.		Never in Scinde.	
	Living.	Deaths.	Living.	Deaths.	Living.	Deaths.
21	100,000	2,978	100,000	5,562	100,000	2,062
22	9,7022	2,170	94,438	3,001	97,938	1,793
23	9,4852	2,436	91,437	3,751	96,145	1,788
24	92,416	2,275	87,686	3,280	94,357	1,688
25	90,141	2,269	84,406	3,306	92,669	1,600
26	87,872	2,463	81,100	3,436	91,069	1,785
27	85,409	2,437	77,664	3,390	89,284	1,710
28	82,972	2,494	74,274	3,229	87,574	1,876
29	80,478	2,393	71,045	3,051	85,698	1,769
30	78,085	2,290	67,994	2,771	83,929	1,790
31	75,795	2,054	65,223	2,489	82,139	1,596
32	73,741	1,967	62,734	2,196	80,543	1,694
33	71,774	1,847	60,538	2,237	78,849	1,489
34	69,927	1,868	58,301	2,317	77,360	1,526
35	68,059	1,805	55,984	2,403	75,834	1,389
36	66,254	1,824	53,581	2,412	74,445	1,417
37	64,430	1,772	51,169	2,448	73,028	1,305
38	62,658	1,767	48,721	2,396	71,723	1,329
39	60,891	1,649	46,325	2,058	70,394	1,349
40	59,242	1,674	44,267	1,870	69,045	1,517
41	57,568	1,685	42,397	1,935	67,528	1,528
42	55,883	1,679	40,462	1,921	66,000	1,543
43	54,204	1,639	38,541	2,077	64,457	1,404
44	52,565	1,655	36,464	1,974	63,053	1,479
45	50,910	1,703	34,490	1,773	61,574	1,673
46	49,207	1,646	32,717	1,576	59,901	1,709
47	47,561	1,535	31,141	1,341	58,192	1,791
48	46,026	1,505	29,800	1,256	56,401	1,814
49	44,521	1,540	28,544	1,350	54,587	1,826
50	42,981	1,358	27,194	1,436	52,761	1,496
51	41,623	1,577	25,758	1,356	51,265	1,814
52	40,046	914	24,402	1,184	49,451	924



TABLE XVIII.  
*Per Centages of Mortality at every Age.*

Ages.	Males.	Both Sexes.	Males.	Males.	Males.	Both Sexes.	Both Sexes.	Males.
	England and Wales. (Neison.)	Carlisle. (Milne.)	Ireland. (Neison.)	Sweden. (Nicander.)	Dundee. (Neison.)	France. (Duvillard)	North- ampton. (Price.)	Glasgow. (Neison.)
21	·694	·815	·744	·856	·822	1·219	1·482	1·228
22	·699	·845	·783	·898	·863	1·262	1·504	1·277
23	·704	·876	·822	·942	·904	1·303	1·527	1·326
24	·709	·908	·861	·969	·945	1·342	1·551	1·374
25	·731	·936	·897	·997	·985	1·379	1·576	1·426
26	·737	·960	·929	1·025	1·025	1·416	1·601	1·482
27	·777	·981	·959	1·035	1·066	1·451	1·627	1·541
28	·870	·998	·985	1·084	1·105	1·484	1·654	1·604
29	·983	1·011	1·007	1·114	1·145	1·517	1·682	1·669
30	1·010	1·023	1·030	1·146	1·185	1·549	1·710	1·735
31	1·020	1·036	1·053	1·140	1·225	1·580	1·740	1·801
32	1·013	1·049	1·075	1·173	1·264	1·611	1·771	1·867
33	1·005	1·063	1·098	1·187	1·304	1·642	1·803	1·933
34	1·015	1·078	1·121	1·201	1·344	1·673	1·836	1·998
35	1·026	1·095	1·149	1·195	1·394	1·705	1·870	2·069
36	1·055	1·113	1·181	1·230	1·455	1·738	1·906	2·146
37	1·085	1·134	1·219	1·246	1·526	1·773	1·943	2·229
38	1·117	1·157	1·261	1·261	1·608	1·810	1·982	2·318
39	1·188	1·184	1·308	1·320	1·700	1·849	2·022	2·413
40	1·300	1·212	1·356	1·510	1·793	1·891	2·091	2·508
41	1·377	1·245	1·403	1·555	1·885	1·937	2·163	2·602
42	1·437	1·279	1·450	1·602	1·977	1·986	2·240	2·697
43	1·458	1·319	1·498	1·606	2·070	2·040	2·291	2·792
44	1·480	1·361	1·545	1·678	2·162	2·099	2·345	2·897
45	1·481	1·407	1·609	1·777	2·254	2·164	2·401	3·010
46	1·482	1·454	1·691	1·880	2·346	2·235	2·461	3·128
47	1·460	1·506	1·789	1·892	2·439	2·313	2·523	3·253
48	1·393	1·560	1·905	1·928	2·531	2·398	2·588	3·385
49	1·368	1·621	2·038	2·067	2·624	2·492	2·691	3·513
50	1·342	1·685	2·170	2·162	2·716	2·595	2·835	3·640
51	1·429	1·761	2·303	2·289	2·809	2·707	2·954	3·768
52	1·520	1·842	2·435	2·370	2·901	2·830	3·044	3·895

TABLE XIX.—*The Equation of Life, representing a term of Years, for which there is an equal probability of Living.*

Ages.	Scinde.	Residue.	Total Army. Bombay.	England and Wales—Males.	Glasgow—Males.
21	16·477	30·697	24·534	43·410	29·423
25	16·100	....	23·635	40·308	27·760
30	15·278	....	22·717	36·487	24·644
35	14·409	....	....	32·635	21·743
40	....	....	....	28·787	19·007
45	....	....	....	24·978	16·363

TABLE XX.—*The Equation of Life, representing a term of Years for which the probability of Living is two to one.*

Ages.	Scinde.	Residue.	Total Army. Bombay.	England and Wales—Males.	Glasgow—Males.
21	9·479	20·563	14·771	32·913	21·595
25	9·876	19·861	14·483	30·570	19·443
30	9·484	18·247	14·307	27·699	16·969
35	8·586	16·391	13·434	24·731	14·819
40	8·230	....	12·393	21·679	12·696
45	....	....	....	18·616	10·933

TABLE XXI.—*The Equation of Life, representing a term of Years, for which the probability of Living is three to one.*

Ages.	Scinde.	Residue.	Total Army. Bombay.	England and Wales—Males.	Glasgow—Males.
21	6·786	14·601	10·387	26·043	16·913
25	6·770	14·661	10·251	24·267	15·102
30	7·070	14·071	10·405	22·127	13·046
35	6·211	12·735	9·919	19·827	11·231
40	5·728	10·653	9·058	17·375	9·591
45	7·000	....	....	14·875	8·169

TABLE XXII.—*Mortality among the Military in various Countries.*

	Mortality per Cent.	Colonel Tulloch.
Dragoon Guards and Dragoons....	1·53	Page 7.
Foot Guards .....	2·16	„ 9.
Household Cavalry .....	1·45	„ 10.
Troops in Ireland .....	1·55	„ 33.
French Army.....	1·95	„ 33.
Prussian Army .....	1·17	„ 33.
White Troops, Gibraltar .....	2·20	„ 6 (a)
Black Troops, „ .....	6·20	„ 17 (a)
British Troops, Malta .....	1·87	„ 22 (a)
Troops in Ionian Islands .....	2·83	„ 32 (a)
Cape of Good Hope .....	1·55	„ 21 (b)
Canada .....	2·00	„ 25 (b)



*On the Accounts of the Bank of England under the Operation of the Act 7 & 8 Vict., c. 32.* By J. T. DANSON, Esq., F.S.S., of the *Middle Temple*.

[Read before the Statistical Society, 18th January, 1847.]

It is the purpose of the present paper to place upon record, in a collected form, and in as clear and simple a manner as the nature of the subject admits of, the principal facts necessary to a just appreciation of the influence of the Act 7 and 8 Vict., c. 32, upon the business of the Bank of England, during the two years extending from the beginning of September, 1844, (when the Act came into operation,) to the beginning of September, 1846.

The subject obviously derives its interest mainly from two considerations; 1st, the very great influence the operations of the Bank of England have upon the commercial transactions of this country, and incidentally upon those of other countries; and, 2ndly, that the legislative measure referred to rests upon a theory of the currency which, whether it be true or false, is very generally admitted to stand upon debateable ground.

Were there a general concurrence of opinion among the highest authorities upon the subject of the currency, as to the truth of the propositions upon which the Act is founded, and consequently as to the propriety of its enactments, it would still, it is conceived, be desirable to ascertain, by an examination of its actual effect upon the business of the Bank, how far the admitted theory was confirmed in practice. But as the highest authorities were not only divided in opinion when the Act was under discussion, but continue to be so, there is an additional and more urgent reason for marking with care every indication the actual operation of the Act may furnish of the truth or fallacy of the particular theory it embodies, and of the validity of which its operation is avowedly regarded by both parties as a test.

It does not, of course, fall within the scope of the present paper, as embracing the results of an investigation purely statistical, to consider the points in dispute between the supporters and the opponents of the Act of 1844, further than as the views of either party may be illustrated, or their correctness tested, by the facts before us. It may, however, be desirable, before entering upon the facts themselves, to state shortly the leading features of the view of the subject generally understood to be taken by each party. They are gathered on the one hand from the writings of Mr. Jones Loyd and Colonel Torrens, and the speeches of Sir Robert Peel in favour of the measure, and, on the other, from the writings of Mr. Tooke and Mr. Fullarton against it, and are comprised in the following propositions. It is held by the former—

1. That the amount of the circulating medium in the hands of the public may be greater or less than is properly required for the transaction of the current business of the community; and that when greater, it tends, by the excess, to make the use of the circulating medium too cheap.

2. That as the value of all other commodities is measured by that of the circulating medium, prices, or the nominal expressions of their value, are at such periods enhanced.

3. That such enhancement, by reducing exports, and stimulating

imports, turns the foreign exchanges against us, and leads to a drain of bullion.

4. That if, on the other hand, the amount of the circulating medium be reduced *below* that properly required for the time, a contrary effect will ensue, producing favourable exchanges, and an influx of bullion.

5. That one principal cause, and that which has heretofore been the most common in this country, of an undue expansion of the circulating medium, is the putting or keeping in circulation, by their issuers, of too large an amount of bank notes payable on demand.

6. That the issuers of such notes can regulate at will the amount of them in circulation; and

7. That if the bank notes in circulation be kept in strict proportion to the bullion in the hands of their issuers, the amount of the circulating medium will be prevented from becoming greater than it should be, and the mischief held to arise from its becoming so will be averted.

The counter propositions of those who hold that the Act of 1844 is not founded upon correct views of the currency may, for the present purpose, be sufficiently stated as follows:—

1. That no greater amount of the circulating medium, whether in coin or notes, is ever in actual use, or therefore in circulation, than is required by the current transactions of the community; for that so much of it as there is no present use for goes either into hoards or into bankers' deposits. That if hoarded, it ceases to have any effect as circulating medium; and that if deposited with bankers, it can only pass again into use *at interest*, which interest will only be paid by those who have a profitable use for it.

2. That while a large portion of the circulating medium is dependent solely upon the credit of its issuers, its extension can, in fact, only be limited by the state of that credit on the one hand, and by the aggregate demand of those who are willing to pay for its use on the other.

3. That while there is a large fund of deposits in every part of the country payable on demand, an issuing banker cannot affect the aggregate amount of the circulating medium by issuing or withdrawing his notes.

4. That the amount of bank notes in circulation, representing only one portion of the addition made by the operations of bankers to the amount of the circulating medium, through the agency of their credit with the public, a restriction upon the amount of the addition so made must be ineffectual, unless it be accompanied by a like restriction on such of their other operations as have the same or a similar effect; and that, therefore, the omission of any regard to deposits, and their effect in supplying, readily and extensively, the place of a portion of the circulating medium of this country, must render the restriction now placed upon the bank notes in circulation ineffectual to limit the amount of the circulating medium, whenever it shall become practically inconvenient either to bankers or to the public.

5. That the true measure of the voluntary addition made by a banker to the amount of the circulating medium is found, *not* in the amount of his notes in circulation, but in the terms upon which he makes advances, or in other words, upon the price he charges for the



use of so much of the circulating medium as he happens to command, either by the actual possession of money, or by his credit; and

6. That any attempt to control the issuing banker by law in the management of this branch of his business would be, in fact, an attempt to fix the price of the use of money, or of credit held sufficient to represent money, which, like all other prices, is, and must continue to be, governed by influences wholly beyond the control of the Legislature.

The Act 7 and 8 Vict. c. 32 (as well as the other measures subsequently applied by Parliament to the banking system of the United Kingdom) was based upon a series of resolutions introduced into the House of Commons by Sir Robert Peel, and there discussed early in the Session of 1844. Three of these resolutions (the 2nd, 3rd, and 4th,) stated, in few words, the main purposes of the Act. They were as follows:—

“ 2. That it is expedient to provide by law that the Bank of England should henceforth be divided into two separate departments, one exclusively confined to the issue and circulation of notes, the other to the conduct of banking business.

“ 3. That it is expedient to limit the amount of securities upon which it shall henceforth be lawful for the Bank of England to issue notes payable to bearer on demand; and that such amount shall only be increased under certain conditions, to be prescribed by law.

“ 4. That it is expedient to provide by law that a weekly publication should be made by the Bank of England of the state both of the Circulation and of the Banking Departments.”

The manner in which these resolutions were subsequently embodied in the Act will be best gathered from a short statement of such of its provisions as are material to the present inquiry.

The first section enacts that, after 31st August, 1844, the issue of promissory notes shall be kept wholly distinct from the general banking business of the Company, and be carried on separately as “The Issue Department of the Bank of England.”

By section 2 the Governor and Company are directed, after the same date, to set apart securities to the value of £14,000,000, and appropriate them to the Issue Department. Of this sum the debt of the Government to the Company is to be taken as part. And, in addition to the securities, there is to be placed in the Issue Department so much of the gold and silver coin in the possession of the Bank as shall not be required in the Banking Department. Thereupon an equal amount in notes (including those in circulation) shall be issued from the Issue Department to the Banking Department; and the whole amount shall be deemed to be issued on the credit of such securities, coin, and bullion.

And by section 6 an account, in a prescribed form, is to be rendered by the Bank of England, weekly, to the Commissioners of Stamps and Taxes, to be by them published in the next succeeding *London Gazette*.

The following tables exhibit, in the order of date, every item of the accounts of the Bank as rendered and published weekly under this Act, from the time it came into operation (1st September, 1844) down to 5th of September, 1846.

It may be necessary to observe, that before the Act of 1844 came into operation the accounts of the Bank were also published, but less frequently, and in another and shorter form. And as the accounts in the form directed by the new Act are, partly from their increased detail, and partly from their appearing in two separate parts, somewhat less generally intelligible than in the old form, and as uniformity is also requisite to any comparison of the state of the accounts before and after the Act, and such comparisons may be found necessary to a right apprehension of the fluctuations now to be observed, the accounts just given are repeated in the old form. And for the sake of additional clearness in this more simple view of the accounts, five figures on the left hand of each sum are omitted throughout, leaving the millions to stand as whole numbers, and the next figure on the right as a decimal fraction.

It will be noticed that the sums given in the second series of tables are none of them to be found in the accounts as stated in the new form. It is therefore proper to state how they are obtained.

The "*circulation*" is obtained by deducting from the "notes issued" from the Issue Department the "notes" remaining in the Banking Department, and adding to the remainder the "seven days' bills." Properly speaking, these bills should not be included in a statement of the circulation made use of in testing the operation of the Act of 1844; for though they commonly circulate as bank notes for some time after the expiration of the period for which they are drawn, and, from the first, serve nearly the same purposes as bank notes, they do not come within the definition of what constitutes the "*circulation*" advanced by the supporters of the Act. They were, however, always included by the Bank in the returns of her note circulation made before the Act, and must therefore be so given in any continuation of the old form of her accounts. And as their amount happens to be tolerably uniform during the period under review, seldom exceeding or falling much short of one million, the addition does not materially affect the apparent variations of the circulation in reference to the remaining items of the account; and the more correct amount may always be obtained, very nearly, by a simple deduction of that sum.

The "*deposits*" are obtained by adding together the amounts now given, separately, as "public deposits" and "private deposits," in the Banking Department.

The "*securities*" are obtained by adding together the "Government debt" and "other securities" in the Issue Department, and the "public" and "other securities" in the Banking Department, and deducting from the sum the amount returned as "capital" in the Banking Department.

The "*bullion*" is obtained by adding the "gold" and "silver" bullion in the Issue Department to the "coin" in the Banking Department.

The "*reserve*" is an item furnished to aid the purpose of the present inquiry. It is obtained by adding together the "notes" and "coin" in the Banking Department. It exhibits the amount of the reserve held at any given time against the sum of the deposits and seven days' bills, and thus marks the proportion of available assets to liabilities payable on demand, fixed by the Bank in the exercise of the discretion left to her in the Banking Department.



## ISSUE DEPARTMENT.

Week ending	Notes.	Government Debt.	Other Securities.	Bullion.	
				Gold.	Silver.
1844.	£	£	£	£	£
Sept. 7 ...	28,351,295	11,015,100	2,984,900	12,657,208	1,694,087
„ 14 ...	28,500,880	11,015,100	2,984,900	12,806,794	1,694,086
„ 21 ...	28,582,705	11,015,100	2,984,900	12,888,619	1,694,086
„ 28 ...	28,362,830	11,015,100	2,984,900	12,668,744	1,694,086
Oct. 5 ...	28,082,905	11,015,100	2,984,900	12,388,819	1,694,086
„ 12 ...	27,838,085	11,015,100	2,984,900	12,149,367	1,688,718
„ 19 ...	27,731,910	11,015,100	2,984,900	12,043,192	1,688,718
„ 26 ...	27,545,736	11,015,100	2,984,900	11,897,842	1,647,888
Nov. 2 ...	27,498,580	11,015,100	2,984,900	11,875,969	1,622,611
„ 9 ...	27,400,995	11,015,100	2,984,900	11,790,467	1,610,528
„ 16 ...	27,597,795	11,015,100	2,984,900	11,914,184	1,593,611
„ 23 ...	27,528,875	11,015,100	2,984,900	11,935,264	1,583,611
„ 30 ...	27,786,190	11,015,100	2,984,900	12,192,579	1,593,611
Dec. 7 ...	27,817,505	11,015,100	2,984,900	12,223,894	1,593,611
„ 14 ...	28,003,705	11,015,100	2,984,900	12,410,094	1,593,611
„ 21 ...	28,151,730	11,015,100	2,984,900	12,558,119	1,593,611
„ 28 ...	28,200,165	11,015,100	2,984,900	12,606,554	1,593,611
1845.					
Jan. 4 ...	28,087,055	11,015,100	2,984,900	12,493,444	1,593,611
„ 11 ...	28,163,130	11,015,100	2,984,900	12,543,092	1,620,038
„ 18 ...	28,133,080	11,015,100	2,984,900	12,480,235	1,652,845
„ 25 ...	28,128,310	11,015,100	2,984,900	12,463,197	1,665,113
Feb. 1 ...	28,232,485	11,015,100	2,984,900	12,548,405	1,684,080
„ 8 ...	28,447,835	11,015,100	2,984,900	12,552,401	1,895,434
„ 15 ...	28,537,255	11,015,100	2,984,900	12,638,987	1,898,268
„ 22 ...	28,679,520	11,015,100	2,984,900	12,755,367	1,924,153
March 1 ...	28,952,105	11,015,100	2,984,900	12,943,918	2,008,187
„ 8 ...	29,040,075	11,015,100	2,984,900	13,008,880	2,031,195
„ 15 ...	29,148,060	11,015,100	2,984,900	13,102,753	2,045,307
„ 22 ...	29,213,555	11,015,100	2,984,900	13,177,831	2,035,724
„ 29 ...	29,471,410	11,015,100	2,984,900	13,380,953	2,090,457
April 5 ...	29,352,145	11,015,100	2,984,900	13,260,543	2,091,602
„ 12 ...	29,216,950	11,015,100	2,984,900	13,143,380	2,073,570
„ 19 ...	29,184,220	11,015,100	2,984,900	13,110,947	2,073,273
„ 26 ...	29,253,945	11,015,100	2,984,900	13,180,672	2,073,273
May 3 ...	29,167,095	11,015,100	2,984,900	13,088,142	2,078,953
„ 10 ...	29,222,935	11,015,100	2,984,900	13,124,113	2,098,822
„ 17 ...	29,340,425	11,015,100	2,984,900	13,237,395	2,103,030
„ 24 ...	29,412,545	11,015,100	2,984,900	13,309,515	2,103,030
„ 31 ...	29,635,735	11,015,100	2,984,900	13,532,705	2,103,030
June 7 ...	29,732,600	11,015,100	2,984,900	13,605,716	2,126,884
„ 14 ...	29,917,115	11,015,100	2,984,900	13,785,460	2,131,655
„ 21 ...	30,051,610	11,015,100	2,984,900	13,911,607	2,140,003
„ 28 ...	30,047,470	11,015,100	2,984,900	13,907,467	2,140,003
July 5 ...	29,891,935	11,015,100	2,984,900	13,751,932	2,140,003
„ 12 ...	29,682,660	11,015,100	2,984,900	13,542,657	2,140,003
„ 19 ...	29,393,700	11,015,100	2,984,900	13,394,306	1,999,394
„ 26 ...	29,243,520	11,015,100	2,984,900	13,244,126	1,999,394
Aug. 2 ...	29,196,760	11,015,100	2,984,900	13,206,991	1,989,769
„ 9 ...	29,141,605	11,015,100	2,984,900	13,151,836	1,989,769
„ 16 ...	29,075,905	11,015,100	2,984,900	13,086,136	1,989,769
„ 23 ...	29,022,310	11,015,100	2,984,900	13,032,541	1,989,769
„ 30 ...	29,009,005	11,015,100	2,984,900	13,019,004	1,990,001

## BANKING DEPARTMENT.

Week ending		Capital.	Rest.	Deposits.		Seven Days' and other Bills.	Securities.		Notes.	Coin.
				Public.	Private.		Public.	Other.		
1844.		£	£	£	£	£	£	£	£	£
Sept.	7	14,553,000	3,564,729	3,630,809	8,644,348	1,030,354	14,554,834	7,835,616	8,175,025	857,765
"	14	14,553,000	3,565,796	4,417,067	8,475,101	1,007,670	14,554,834	8,146,689	8,620,220	696,891
"	21	14,553,000	3,567,007	5,293,615	8,511,771	972,959	14,554,834	8,802,714	8,964,545	576,259
"	28	14,553,000	3,568,518	6,010,235	8,286,772	1,052,280	14,554,834	9,795,840	8,460,706	659,426
Oct.	5	14,553,000	3,552,704	6,202,322	8,225,082	1,081,258	14,554,834	10,510,120	7,930,010	619,402
"	12	14,553,000	3,059,645	8,147,290	8,230,673	1,107,985	16,352,834	10,528,785	7,610,025	606,919
"	19	14,553,000	3,102,033	3,965,196	8,506,798	1,074,673	15,676,037	8,418,826	6,648,665	458,172
"	26	14,553,000	3,105,387	3,556,646	8,291,481	1,065,712	15,408,775	8,387,508	6,224,845	551,098
Nov.	2	14,553,000	3,131,881	3,471,119	8,757,379	1,051,941	15,070,775	8,675,659	6,678,715	540,171
"	9	14,553,000	3,133,564	3,653,893	8,340,444	1,019,350	14,409,775	8,731,567	6,844,275	714,634
"	16	14,553,000	3,137,195	3,879,458	8,029,934	989,320	13,539,775	9,398,630	6,927,045	723,457
"	23	14,553,000	3,139,027	4,812,191	7,864,144	965,990	13,539,775	9,547,462	7,410,400	836,715
"	30	14,553,000	3,140,040	5,226,633	8,345,610	949,133	13,539,775	9,958,645	7,943,850	772,146
Dec.	7	14,553,000	3,110,069	5,795,572	8,442,809	966,455	13,540,619	10,193,713	8,286,105	827,468
"	14	14,553,000	3,105,886	6,385,654	3,381,188	994,174	13,540,619	10,293,154	8,745,540	840,589
"	21	14,553,000	3,110,513	7,075,258	8,348,738	967,934	13,540,619	10,763,777	8,959,630	791,417
"	28	14,553,000	3,113,267	7,411,605	8,265,079	984,540	13,540,619	11,031,821	9,076,800	678,251
1845.										
Jan.	4	14,553,000	3,127,278	7,366,643	8,037,320	1,015,166	13,539,720	11,426,996	8,418,125	714,566
"	11	14,553,000	3,194,623	4,128,966	8,877,905	1,019,528	14,386,839	9,001,544	7,772,930	612,709
"	18	14,553,000	3,208,159	3,069,572	8,803,570	1,079,821	13,843,692	8,627,598	7,588,085	654,747
"	25	14,553,000	3,209,696	2,787,253	8,714,052	1,058,727	13,651,692	8,561,399	7,418,075	691,562
Feb.	1	14,553,000	3,298,944	2,852,124	8,713,690	1,085,065	13,541,692	8,652,751	7,642,235	666,145
"	8	14,553,000	3,302,806	3,715,171	9,732,193	1,068,046	13,476,160	10,065,958	8,128,350	700,748
"	15	14,553,000	3,302,136	4,630,247	9,944,408	1,031,922	13,474,379	10,821,457	8,395,065	770,812
"	22	14,553,000	3,252,281	5,237,999	9,941,556	985,035	13,522,379	10,784,494	8,889,215	773,783
March	1	14,553,000	3,575,172	5,476,984	10,323,799	983,328	13,474,379	11,707,400	8,952,545	777,959
"	8	14,553,000	3,577,267	5,879,753	10,379,610	982,386	13,474,379	11,720,451	9,340,815	836,363
"	15	14,553,000	3,579,429	6,451,283	9,994,572	980,378	13,474,379	11,836,377	9,451,385	796,521
"	22	14,553,000	3,581,884	6,890,121	10,452,425	992,192	13,474,379	12,535,169	9,673,205	786,869
"	29	14,553,000	3,584,054	7,321,855	10,713,052	1,023,977	13,589,379	13,126,469	9,747,280	732,810
April	5	14,553,000	3,586,219	6,924,106	10,445,950	1,063,189	13,474,379	13,123,678	9,252,350	722,057
"	12	14,553,000	3,147,578	4,355,166	11,753,022	1,085,969	15,147,495	11,069,829	8,001,434	675,977
"	19	14,553,000	3,151,333	3,218,350	11,531,267	1,122,066	14,471,966	10,654,085	7,791,345	658,620
"	26	14,553,000	3,176,289	2,643,448	10,781,637	1,181,547	13,921,966	9,680,272	8,101,770	631,913
May	3	14,553,000	3,183,817	2,712,041	10,355,640	1,139,238	13,616,966	9,857,686	7,827,925	641,159
"	10	14,553,000	3,183,822	3,391,477	10,065,486	1,106,626	13,416,966	10,104,644	8,140,050	638,751
"	17	14,553,000	3,188,579	4,357,386	10,276,032	1,060,598	13,385,797	10,656,808	8,734,045	658,945
"	24	14,553,000	3,191,461	5,051,007	10,087,531	1,021,487	13,384,898	10,644,537	9,014,845	860,206
"	31	14,553,000	3,181,245	5,352,114	10,865,704	1,030,555	13,464,898	11,558,992	9,182,485	776,243
June	7	14,553,000	3,136,091	5,745,482	10,564,624	1,018,497	13,384,898	11,470,805	9,382,505	779,486
"	14	14,553,000	3,136,239	6,261,465	10,315,111	976,405	13,384,898	11,305,902	9,854,615	696,805
"	21	14,553,000	3,140,557	6,951,773	10,147,586	1,001,232	13,384,898	11,984,420	9,837,175	587,705
"	28	14,553,000	3,143,841	7,398,420	10,154,148	1,026,853	13,384,898	12,619,663	9,717,270	554,431
July	5	14,553,000	3,164,433	7,330,309	10,041,440	1,045,502	13,384,206	12,944,496	9,279,785	526,197
"	12	14,553,000	3,218,008	3,456,089	11,356,519	1,081,545	13,800,344	11,282,221	8,068,970	513,626
"	19	14,553,000	3,234,268	2,834,528	10,934,390	1,091,953	13,456,776	10,815,121	7,890,610	485,632
"	26	14,553,000	3,321,972	2,933,908	10,745,613	1,085,211	13,539,344	10,607,877	7,942,485	549,998
Aug.	2	14,553,000	3,338,246	3,215,363	10,960,214	1,072,260	13,321,844	11,463,603	7,849,785	503,851
"	9	14,553,000	3,340,750	4,034,767	10,187,780	1,050,220	13,321,844	11,634,159	7,682,465	528,049
"	16	14,553,000	3,348,596	1,969,963	8,973,401	1,374,346	13,441,844	11,679,359	7,494,205	603,898
"	23	14,553,000	3,349,282	5,393,936	8,403,887	1,383,566	13,321,844	11,353,577	7,832,955	580,295
"	30	14,553,000	3,588,888	5,830,311	8,571,253	1,059,606	13,347,570	11,712,811	7,959,390	583,287



## ISSUE DEPARTMENT.

Week ending	Notes.	Government Debt.	Other Securities.	Bullion.	
				Gold.	Silver.
	£	£	£	£	£
1845.					
Sept. 6 ...	28,953,300	11,015,100	2,984,900	12,982,591	1,970,709
„ 13 ...	28,790,195	11,015,100	2,984,900	12,819,486	1,970,709
„ 20 ...	28,798,230	11,015,100	2,984,900	12,863,507	1,934,723
„ 27 ...	28,557,990	11,015,100	2,984,900	12,717,050	1,840,940
Oct. 4 ...	28,355,670	11,015,100	2,984,900	12,514,730	1,840,940
„ 11 ...	28,068,820	11,015,100	2,984,900	12,253,289	1,815,531
„ 18 ...	27,778,955	11,015,100	2,984,900	12,018,447	1,760,508
„ 25 ...	27,415,690	11,015,100	2,984,900	11,758,159	1,657,531
Nov. 1 ...	27,267,115	11,015,100	2,984,900	11,661,681	1,605,434
„ 8 ...	27,202,365	11,015,100	2,984,900	11,670,074	1,532,291
„ 15 ...	26,974,685	11,015,100	2,984,900	11,478,722	1,495,963
„ 22 ...	27,036,550	11,015,100	2,984,900	11,441,931	1,594,619
„ 29 ...	26,733,810	11,015,100	2,984,900	11,159,981	1,573,829
Dec. 6 ...	26,540,480	11,015,100	2,984,900	10,992,631	1,547,849
„ 13 ...	26,626,350	11,015,100	2,984,900	11,054,501	1,571,849
„ 20 ...	26,819,390	11,015,100	2,984,900	11,240,465	1,578,925
„ 27 ...	26,771,510	11,015,100	2,984,900	11,189,484	1,582,026
1846.					
Jan. 3 ...	26,675,925	11,015,100	2,984,900	11,093,869	1,582,056
„ 10 ...	26,541,200	11,015,100	2,984,900	11,006,127	1,535,073
„ 17 ...	26,573,910	11,015,100	2,984,900	11,025,956	1,547,954
„ 24 ...	26,525,025	11,015,100	2,984,900	10,974,471	1,550,554
„ 31 ...	26,587,355	11,015,100	2,984,900	11,028,945	1,558,410
Feb. 7 ...	26,698,620	11,015,100	2,984,900	11,140,210	1,558,410
„ 14 ...	26,800,325	11,015,100	2,984,900	11,177,282	1,623,043
„ 21 ...	26,973,255	11,015,100	2,984,900	11,346,130	1,627,125
„ 28 ...	27,015,295	11,015,100	2,984,900	11,353,065	1,662,230
March 7 ...	27,079,270	11,015,100	2,984,900	11,417,040	1,662,230
„ 14 ...	27,117,805	11,015,100	2,984,900	11,407,524	1,710,281
„ 21 ...	27,264,475	11,015,100	2,984,900	11,554,194	1,710,281
„ 28 ...	27,269,245	11,015,100	2,984,900	11,558,964	1,710,281
April 4 ...	27,181,980	11,015,100	2,984,900	11,460,445	1,721,535
„ 11 ...	27,030,255	11,015,100	2,984,900	11,308,300	1,721,955
„ 18 ...	27,031,510	11,015,100	2,984,900	11,250,593	1,780,917
„ 25 ...	27,049,510	11,015,100	2,984,900	11,256,880	1,792,630
May 2 ...	27,072,295	11,015,100	2,984,900	11,279,130	1,793,165
„ 9 ...	27,244,995	11,015,100	2,984,900	11,451,830	1,793,165
„ 16 ...	27,520,215	11,015,100	2,984,900	11,633,619	1,886,596
„ 23 ...	27,706,865	11,015,100	2,984,900	11,782,453	1,924,412
„ 30 ...	27,993,880	11,015,100	2,984,900	12,062,597	1,931,283
June 6 ...	28,325,000	11,015,100	2,984,900	12,192,710	2,132,290
„ 13 ...	28,603,395	11,015,100	2,984,900	12,371,105	2,232,290
„ 20 ...	29,005,160	11,015,100	2,984,000	12,592,403	2,412,757
„ 27 ...	29,273,105	11,015,100	2,984,900	12,849,579	2,423,526
July 4 ...	29,322,200	11,015,100	2,984,900	12,905,074	2,417,126
„ 11 ...	29,266,360	11,015,100	2,984,900	12,844,442	2,421,918
„ 18 ...	29,139,905	11,015,100	2,984,900	12,703,642	2,436,263
„ 25 ...	29,312,945	11,015,100	2,984,900	12,875,243	2,437,702
Aug. 1 ...	29,292,320	11,015,100	2,984,900	12,854,618	2,437,702
„ 8 ...	29,386,305	11,015,100	2,984,900	12,935,426	2,450,879
„ 15 ...	29,456,535	11,015,100	2,984,900	12,958,912	2,497,623
„ 22 ...	29,653,990	11,015,100	2,984,900	13,145,719	2,508,271
„ 29 ...	29,875,890	11,015,100	2,984,900	13,199,102	2,676,788
Sept. 5 ...	29,760,870	11,015,100	2,984,900	13,057,997	2,702,873

## BANKING DEPARTMENT.

Week ending.		Capital.	Rest.	Deposits.		Seven Days' and other Bills.	Securities.		Notes.	Coin.
				Public.	Private.		Public.	Other.		
1845.		£	£	£	£	£	£	£	£	£
Sept.	6	14,553,000	3,608,180	6,474,705	8,507,213	1,021,689	13,468,643	11,967,081	8,255,505	473,558
"	13	14,553,000	3,611,164	7,319,619	8,316,750	963,995	13,348,643	12,391,188	8,430,700	593,997
"	20	14,553,000	3,616,685	8,222,109	8,110,787	1,020,324	13,348,643	13,297,048	8,327,895	549,319
"	27	14,553,000	3,621,711	8,802,110	8,070,212	1,000,311	13,348,643	14,149,003	7,946,995	602,703
Oct.	4	14,553,000	3,629,978	8,703,497	8,167,961	1,088,160	13,348,643	15,188,965	7,095,615	509,373
"	11	14,553,000	3,140,006	8,782,975	8,474,856	1,081,206	13,348,643	15,133,966	7,037,600	511,834
"	18	14,553,000	3,188,641	4,488,419	9,835,604	1,123,843	13,203,138	14,049,529	5,525,510	411,330
"	25	14,553,000	3,212,133	4,323,662	8,930,134	1,000,472	13,203,138	12,931,115	5,389,575	585,573
Nov.	1	14,553,000	3,224,453	4,487,058	9,099,737	1,106,405	13,203,138	13,429,813	5,219,775	617,927
"	8	14,553,000	3,234,595	5,340,731	9,134,243	1,133,320	13,203,138	14,234,438	5,437,730	520,583
"	15	14,553,000	3,244,733	6,524,834	8,899,130	1,101,349	13,203,138	15,041,397	5,483,110	595,401
"	22	14,553,000	3,252,209	7,363,168	9,024,223	1,063,589	13,201,863	15,454,390	6,076,985	522,951
"	29	14,553,000	3,246,426	7,670,581	8,992,719	1,045,574	13,201,863	15,871,054	5,932,345	503,038
Dec.	6	14,553,000	3,209,394	8,110,401	9,022,019	1,004,471	13,201,863	16,224,712	5,945,840	526,870
"	13	14,553,000	3,215,596	8,684,374	9,089,705	943,591	13,201,863	16,135,637	6,506,345	642,421
"	20	14,553,000	3,221,636	9,408,044	8,715,667	960,094	13,201,863	16,329,285	6,768,340	558,953
"	27	14,553,000	3,227,443	9,698,409	8,482,239	961,859	13,201,863	16,252,051	6,914,660	554,376
1846.										
Jan.	3	14,553,000	3,254,660	9,369,636	8,350,465	959,967	13,201,072	16,262,593	6,418,510	605,547
"	10	14,553,000	3,314,454	5,191,017	10,656,207	1,020,503	13,137,047	15,273,096	5,672,855	652,183
"	17	14,553,000	3,341,777	4,710,957	11,254,618	1,009,030	13,137,047	15,773,124	5,393,745	565,466
"	24	14,553,000	3,356,690	4,464,806	14,208,608	1,028,388	13,137,047	18,381,010	5,416,380	677,055
"	31	14,553,000	3,451,151	4,389,810	17,036,830	987,102	13,137,047	21,466,997	5,112,860	700,989
Feb.	7	14,553,000	3,462,787	5,054,438	18,912,445	963,888	13,137,047	22,908,661	6,263,625	637,025
"	14	14,553,000	3,474,577	5,738,873	18,018,523	945,332	13,137,047	22,251,906	6,674,075	667,277
"	21	14,553,000	3,477,016	6,202,903	18,091,320	918,282	13,137,047	22,539,192	6,887,810	678,472
"	28	14,553,000	3,689,430	6,296,535	18,647,068	947,432	13,136,440	23,242,035	6,984,485	760,505
March	7	14,553,000	3,757,708	6,502,355	17,828,778	898,176	13,136,440	22,118,987	7,576,625	707,965
"	14	14,553,000	3,767,623	6,804,524	17,476,998	887,487	13,136,440	21,923,787	7,712,120	717,285
"	21	14,553,000	3,780,009	7,065,422	17,356,203	921,887	13,136,440	21,806,194	8,033,665	700,222
"	28	14,553,000	3,789,971	7,319,625	17,103,928	953,579	13,136,731	22,181,392	7,683,690	718,290
April	4	14,553,000	3,799,508	7,074,026	16,763,047	965,446	13,136,440	22,058,631	7,316,415	643,541
"	11	14,553,000	3,352,391	4,210,976	18,069,993	959,379	14,437,065	19,438,782	6,728,120	541,772
"	18	14,553,000	3,359,084	3,197,029	17,710,987	986,017	13,957,865	18,736,602	6,515,990	595,660
"	25	14,553,000	3,364,576	2,698,953	16,978,110	962,415	13,528,065	17,884,532	6,488,140	656,317
May	2	14,553,000	3,396,540	2,578,451	16,780,380	965,730	13,303,065	17,901,148	6,408,470	661,418
"	9	14,553,000	3,406,284	3,031,375	16,256,526	981,417	13,023,065	17,734,025	6,836,405	635,107
"	16	15,553,000	3,418,272	4,084,117	16,354,017	963,128	12,988,065	18,222,548	7,497,460	664,461
"	23	14,553,000	3,426,036	4,809,183	15,947,268	970,401	12,988,065	18,236,480	7,774,925	706,478
"	30	14,553,000	3,378,878	5,228,640	16,165,620	890,192	13,008,065	18,460,493	8,043,560	704,212
June	6	14,553,000	3,379,044	5,753,512	15,927,013	852,008	12,988,065	18,321,641	8,468,180	686,691
"	13	14,553,000	3,386,810	6,537,132	15,518,397	862,665	12,988,065	18,122,098	9,011,510	736,331
"	20	14,553,000	3,396,774	7,313,539	15,293,909	832,981	13,090,946	17,984,603	9,631,235	683,419
"	27	14,553,000	3,405,354	7,807,802	15,034,361	851,222	12,987,946	18,257,149	9,664,090	742,554
July	4	14,553,000	3,424,178	7,794,200	14,402,460	887,364	12,987,142	18,145,319	9,303,090	625,651
"	11	14,553,000	3,482,541	3,489,416	15,661,286	941,566	12,962,147	16,143,726	8,425,630	596,306
"	18	14,553,000	3,504,138	3,162,696	14,904,973	989,462	12,962,560	15,382,397	8,139,020	630,292
"	25	14,553,000	3,508,378	3,438,401	14,305,311	940,024	12,962,560	14,583,407	8,562,695	636,482
Aug.	1	14,553,000	3,597,673	3,793,610	13,449,388	943,423	12,961,735	14,068,257	8,796,875	510,233
"	8	14,553,000	3,603,683	5,014,200	12,456,737	952,056	12,961,735	13,984,578	9,075,160	558,203
"	15	14,553,000	3,611,298	6,135,636	10,794,523	905,994	12,961,735	13,848,421	8,601,335	588,960
"	22	14,553,000	3,613,216	6,843,002	10,074,026	920,016	12,961,735	13,012,824	9,506,025	522,676
"	29	14,553,000	3,354,370	7,142,212	9,161,868	885,680	12,961,735	12,395,457	9,449,760	490,178
Sept.	5	14,553,000	3,864,479	7,318,919	8,557,109	935,830	12,961,735	12,523,550	9,231,095	512,957



Week ending	Bullion.	Circulation (including Bank Post Bills.)	Deposits.	Securities.	Reserve.
1844.					
Sept. 7.....	15·1	21·2	12·2	21·8	9·0
„ 14.....	15·1	20·9	12·8	22·1	9·3
„ 21.....	15·1	20·6	13·8	22·8	9·5
„ 28.....	15·0	20·9	14·2	23·7	9·1
Oct. 5.....	14·6	21·1	14·4	24·5	8·5
„ 12.....	14·3	21·3	16·3	26·3	8·2
„ 19.....	14·1	22·1	12·4	23·5	7·0
„ 26.....	14·0	22·3	11·8	23·2	6·7
Nov. 2.....	14·0	22·2	12·2	23·1	7·1
„ 9.....	14·1	21·6	11·9	22·5	7·5
„ 16.....	14·2	21·5	11·8	22·3	7·6
„ 23.....	14·3	21·0	12·6	22·5	8·2
„ 30.....	14·5	20·7	13·5	22·9	8·7
Dec. 7.....	14·6	20·5	14·2	23·1	9·1
„ 14.....	14·8	20·2	14·7	23·2	9·5
„ 21.....	14·9	20·1	15·4	23·7	9·6
„ 28.....	14·8	20·1	15·6	24·0	9·7
1845.					
Jan. 4.....	14·8	20·6	15·3	24·4	9·1
„ 11.....	14·7	21·4	12·9	22·8	8·3
„ 18.....	14·7	21·6	11·8	21·9	8·2
„ 25.....	14·8	21·7	11·4	21·5	8·1
Feb. 1.....	14·8	21·6	11·5	21·6	8·3
„ 8.....	15·1	21·3	13·4	22·9	8·8
„ 15.....	15·3	21·1	14·5	23·7	9·1
„ 22.....	15·4	20·7	15·1	23·7	9·6
March 1.....	15·7	20·9	15·7	24·6	9·7
„ 8.....	15·8	20·6	16·2	24·6	10·1
„ 15.....	15·9	20·6	16·4	24·7	10·2
„ 22.....	16·0	20·5	17·3	25·4	10·4
„ 29.....	16·2	20·7	18·0	26·1	10·4
April 5.....	16·0	21·1	17·3	26·0	9·9
„ 12.....	15·8	22·3	16·1	25·6	8·6
„ 19.....	15·8	22·5	14·7	24·5	8·4
„ 26.....	15·8	22·3	11·4	23·0	8·7
May 3.....	15·8	22·4	13·0	22·9	8·4
„ 10.....	15·8	22·1	13·4	22·9	8·7
„ 17.....	15·9	21·6	14·6	23·4	9·3
„ 24.....	16·2	21·4	15·1	23·4	9·8
„ 31.....	16·4	21·4	16·2	24·4	9·9
June 7.....	16·5	21·3	16·3	24·3	10·1
„ 14.....	16·6	21·0	16·5	24·1	10·5
„ 21.....	16·6	21·2	17·0	24·8	10·4
„ 28.....	16·6	21·3	17·5	25·4	10·2
July 5.....	16·4	21·6	17·3	25·7	9·7
„ 12.....	16·1	22·6	14·8	25·5	8·5
„ 19.....	15·8	22·5	13·7	23·7	8·3
„ 26.....	15·7	22·3	13·6	23·5	8·4
Aug. 2.....	15·7	22·4	14·1	24·2	8·3
„ 9.....	15·6	22·5	14·2	24·4	8·2
„ 16.....	15·6	22·9	13·9	24·5	8·0
„ 23.....	15·6	22·5	13·7	24·1	8·4
„ 30.....	15·5	22·1	14·4	24·5	8·5

Week ending	Bullion.	Circulation (including Bank Post Bills.)	Deposits.	Securities.	Reserve.
1845.					
Sept. 6.....	15·4	21·7	14·9	24·8	8·7
„ 13.....	15·3	21·3	15·6	25·1	9·0
„ 20.....	15·3	21·4	16·3	26·0	8·8
„ 27.....	15·1	21·6	16·8	26·9	8·5
Oct. 4.....	14·8	22·3	16·8	27·9	7·5
„ 11.....	14·5	22·1	17·2	27·9	7·5
„ 18.....	14·1	23·3	14·3	26·6	5·9
„ 25.....	14·0	23·1	13·2	25·5	5·9
Nov. 1.....	13·8	23·1	13·5	26·0	5·8
„ 8.....	13·7	22·8	14·4	26·8	5·9
„ 15.....	13·5	22·5	15·4	27·6	6·0
„ 22.....	13·5	22·0	16·3	28·1	6·5
„ 29.....	13·2	21·8	16·6	28·5	6·4
Dec. 6.....	13·0	21·5	17·1	28·8	6·4
„ 13.....	13·2	21·0	17·7	28·7	7·1
„ 20.....	13·3	21·0	18·1	28·9	7·3
„ 27.....	13·3	20·8	18·1	28·9	7·4
1846.					
Jan. 3.....	13·2	21·2	17·7	28·9	7·0
„ 10.....	13·1	21·8	15·8	27·8	6·3
„ 17.....	13·1	22·1	15·9	28·3	5·9
„ 24.....	13·1	22·1	18·6	30·9	6·0
„ 31.....	13·2	22·4	21·4	34·0	5·8
Feb. 7.....	13·3	21·3	23·9	35·4	6·8
„ 14.....	13·4	21·0	23·7	34·8	7·3
„ 21.....	13·6	21·0	24·2	35·1	7·5
„ 28.....	13·7	20·9	24·9	35·8	7·7
March 7.....	13·7	20·3	24·3	34·6	8·2
„ 14.....	13·8	20·2	23·2	34·5	8·4
„ 21.....	13·9	20·1	24·3	34·3	8·7
„ 28.....	13·9	20·5	24·4	34·7	8·3
April 4.....	13·8	20·8	23·8	34·6	7·9
„ 11.....	13·5	21·2	22·2	33·3	7·2
„ 18.....	13·6	21·5	20·9	32·1	7·1
„ 25.....	13·6	21·5	19·6	30·8	7·1
May 2.....	13·7	21·6	19·3	30·6	7·0
„ 9.....	13·8	21·3	19·2	30·0	7·2
„ 16.....	14·1	21·1	20·3	30·6	8·1
„ 23.....	14·4	21·1	20·7	30·6	8·4
„ 30.....	14·7	20·8	21·3	30·9	8·7
June 6.....	14·9	20·7	21·6	30·7	9·1
„ 13.....	15·3	20·4	22·0	30·5	9·7
„ 20.....	15·6	20·2	22·6	30·4	10·3
„ 27.....	16·0	20·4	22·8	30·6	10·4
July 4.....	15·9	20·9	22·1	30·6	9·9
„ 11.....	15·8	21·7	19·3	28·5	9·0
„ 18.....	15·7	22·0	18·0	27·7	8·7
„ 25.....	15·9	21·7	17·0	26·9	9·1
Aug. 1.....	15·7	21·4	17·2	26·4	9·2
„ 8.....	15·9	21·2	17·4	26·3	9·6
„ 15.....	15·9	21·7	16·9	26·2	9·1
„ 22.....	16·1	21·0	16·9	25·4	10·0
„ 29.....	16·3	21·2	16·3	24·8	9·9
Sept. 5.....	16·2	21·4	15·8	24·9	9·7



Before noticing the fluctuations shown in these accounts, it may be well to observe the effect of the payment of the dividends on the public funds quarterly. The periodical changes produced by these payments in the state of the Bank accounts, though of a perfectly legitimate nature, serve occasionally to give an apparent exaggeration to fluctuations of a different description, and, unless carefully regarded, are apt to falsify inferences drawn from a comparison of the accounts of one period with those of another. But in reference to the object of the present inquiry, it is more particularly to be observed, that previous to October, 1844, a period nearly coincident with that at which the Act of 1844 came into operation, the manner in which the payment of dividends was distributed over the quarters of the year had, to a much greater extent than at present, the effect of aiding occasional disturbances of the currency, and diminishing in some degree the power of the Bank in the use of the discretion she was then generally supposed to have, and was held bound to exercise over it. The sum annually payable in England upon the funded debt before that date may be stated in round numbers at about £27,000,000. If paid in four equal parts, it would therefore cause, four times a-year, a payment or transfer from public deposits of about £6,700,000. But the dividends being payable half-yearly, and about two-thirds in amount being payable in January and July, the payments made at the Bank of England at those quarters, previous to October, 1844, were not far from nine millions in amount, those of April and October being considerably less than five millions. And as the revenue, whence the public deposits were replenished, came in much more equably, there was usually a deficiency to be made up by extra advances from the Bank in January and July, which were repaid as the revenue came in subsequently. When (in 1844) the  $3\frac{1}{2}$  per cent. stock was reduced the annual charge of the funded debt was diminished by about £625,000; and at the same time the days for payment of the dividends upon a part of the reduced stock, amounting to upwards of four millions yearly, were moved from January and July to April and October. The effect was to make the amount of the dividends payable by the Bank, on account of the Government, nearly the same at each of the four quarters, and therefore to render more equal the quarterly fluctuations of the circulation exhibited in the Bank accounts.

The bearing of this alteration upon the management of the affairs of the Bank will be obvious when it is considered that the immediate effect of each payment of dividends is to diminish, to some extent, the proper basis of the operations of the Bank, as a body making profit by the advance of capital held in deposit. The payment of some eight or nine millions twice a-year in the first days of January and of July acted upon the public deposits precisely as cheques to that amount upon private deposits. And though a part of it passed at once into the private deposits, and the advances of the Bank were always so timed as to anticipate the operation as to the rest, the periodical and unavoidable necessity of so heavy a draft upon deposits (necessarily preceded, when the revenue was deficient, by a large advance upon Government securities) had an evil influence upon the position of the Bank in times of difficulty. The equalization of the quarterly payments of dividends is therefore to be allowed for in

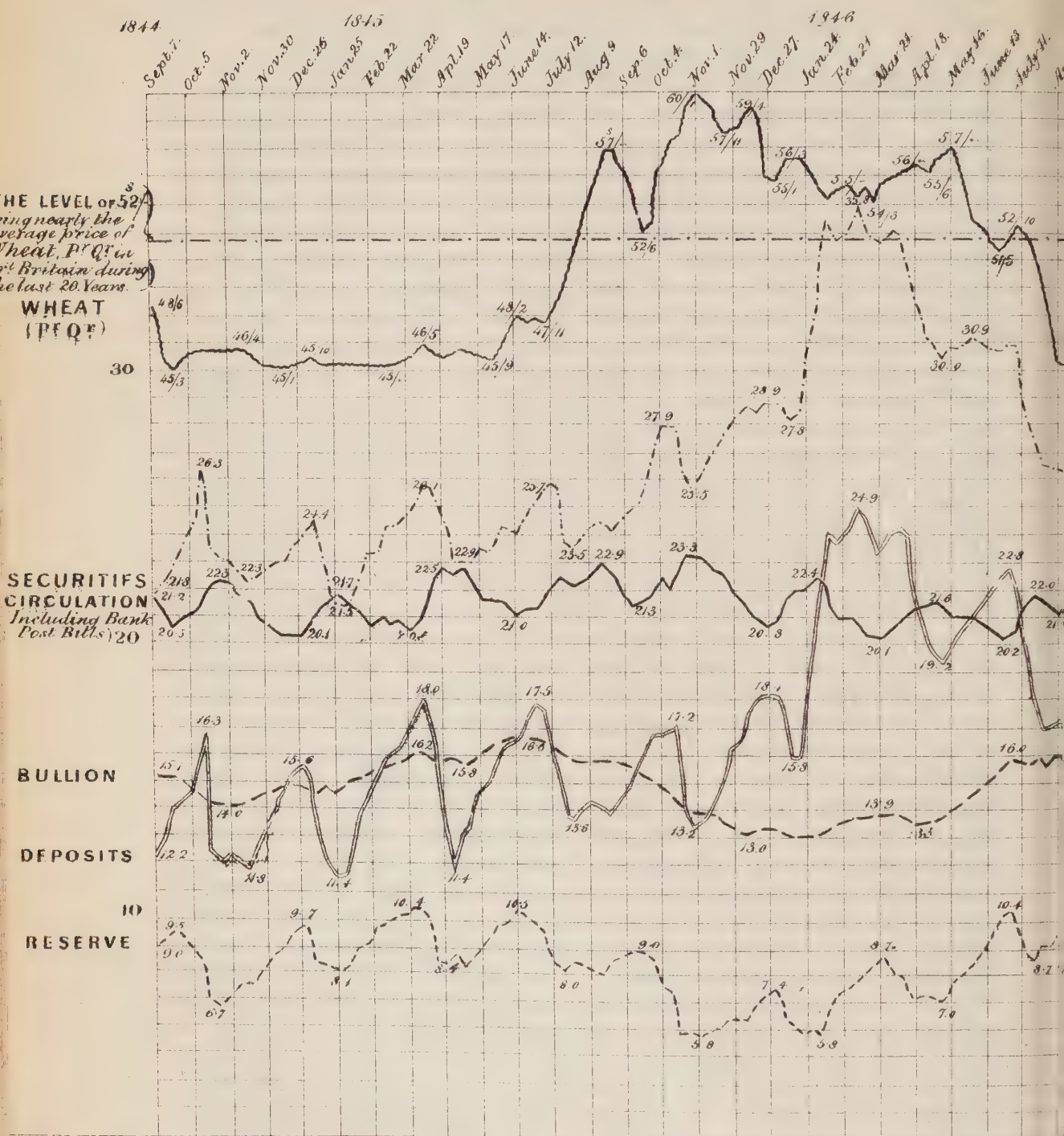




# DIAGRAM

TO ILLUSTRATE THE ACCOUNTS OF  
THE BANK OF ENGLAND UNDER THE OPERATION

Of the Act 7 & 8 Vic. C. 32.

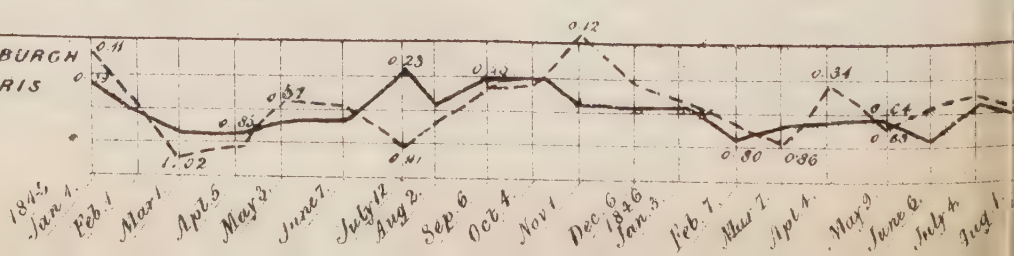


PRICES Quarterly  
COTTON WOOL  
owned Georgia  
at Liverpool.)

$\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{4}$  to  $\frac{4}{3}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$   $\frac{3}{2}$  to  $\frac{5}{4}$

PRICE OF GOLD  
IN LONDON

IN HAMBURG  
IN PARIS



comparing the accounts of the Bank now exhibited with those of any period anterior to October, 1844, as leaving the amount of bank notes in the hands of the public less liable to sudden expansions twice a-year.

Prior to entering upon a review of the facts apparent upon the face of these tables, it is also desirable that notice should be taken of some other facts more or less connected with and bearing upon these—as the rate of interest, the state of the foreign exchanges, the cost of food, and the state of trade, during the two years under review.

From September, 1844, to January, 1845, the advances of the Bank were made upon bills having ninety-five days to run at  $2\frac{1}{2}$  per cent. From January to March the same rate of interest was continued, but upon bills limited to eighty-five days. In March the term of ninety-five days was resumed, and the rate of interest still continued at  $2\frac{1}{2}$  per cent., but only *as a minimum*, the actual rates charged varying thenceforward with the character of the security. On the 16th of October, 1845, the minimum rate was raised to 3 per cent., and on the 6th of November to  $3\frac{1}{2}$  per cent. It continued at that rate till a few days before the close of the two years under review, viz., 27th August, 1846, when it was reduced to 3 per cent.

The *current* rate of interest on first-class bills was, in September, 1844, 2 per cent; in October,  $2\frac{1}{2}$  to 3 per cent. In the beginning of 1845 it was lower— $2\frac{1}{4}$  to  $2\frac{1}{2}$  per cent.—and continued so till near the end of August, when the railway speculations of that year attained about their greatest extent. In September it began to rise, and slowly but steadily continued to do so, till the end of February, 1846, when the deposits at the Bank of England on account of railways were completed. It then reached 5 per cent. Thenceforward it fell gradually through the remainder of the period embraced by these tables, and at the close of it was at  $2\frac{3}{4}$  to  $3\frac{1}{2}$  per cent.

The foreign exchanges, as indicated by the relative values of gold in London, Paris, and Hamburg, were in favour of this country during the whole of the two years, with a single exception in November, 1845, when, for a week or two, the exchange with Hamburg was slightly adverse\*.

The harvest of 1844 is believed to have been the largest ever produced in this country. There was also a general abundance in Europe and America, with one exception (caused by heavy rains just before the harvest) in the Low Countries; where, however, the deficiency was amply made up by the surplus of Northern Europe. There was also a large quantity of old wheat on hand. Accordingly, from September, 1844, to the end of June, 1845, the price of wheat in England averaged about 46s. per quarter. But about the end of June, 1845, the failure of the potato crop became generally known, and it began to be anticipated that the grain crops would prove deficient. During the six weeks ending the 9th of August, 1845, the imperial average price of wheat rose from 47s. 11d. to 57s.†. It receded by the middle of September to 52s. 6d. It was then fully ascertained that the crop of 1845 was deficient both in quantity and in quality, and the price rose again, till it reached 60s. 1d. on the 1st of November. Thenceforward, to the middle of May, 1846, the general average was

\* See Diagram No. 1.

† Ibid.



about 57s. After May it fell pretty regularly, till it reached 45s. 1d. on the 15th of August; and when the two years under review closed, the average price of wheat was at 49s., and rising under anticipations of scarcity.

Of the state of trade it may suffice to observe, that the year 1845 was an unusually busy and profitable one, alike to the capitalist and the labourer, in every branch of production. The quantity of raw cotton imported and retained for consumption in that year was the largest on record. The same may be said of wool. The quantities of sugar, coffee, and tea imported and consumed in this country were also larger than in any previous year. The declared value of the principal articles of British produce exported also exceeded that of any previous year. And lastly, the aggregate tonnage of the shipping which entered and cleared out from the ports of the United Kingdom showed a similar increase. During the first eight months of the year 1846, included in these tables, the returns of the progress of our trade are not equally satisfactory. There was a diminution, as compared with the same period of 1845, in the value of British produce exported. This, however, is attributed with much apparent correctness, to the large amount of profitable employment offered to labour and capital in the construction of railways. The consumption of imported commodities generally, and of coffee and tea in particular, still showed an increase. That of sugar was diminished. At the same time the imports of provisions of all kinds were increased, and the quantity of timber imported (chiefly in connexion with the construction of railways) was fully 30 per cent. greater than in the same period of 1845.

Altogether, it may be said that during the greater part of the two years included in these tables the productive powers of the country were very fully and profitably employed; that during the whole of it, with the exception of the few months from the revulsion in the Share Market in October, 1845, to the completion of the arrangements for receiving and readvancing the railway deposits by the Bank in March, 1846, money for ordinary commercial purposes was abundant at a comparatively low rate of interest, and that the general condition of the people was, throughout, one of decided prosperity.

The extraordinary railway speculations of 1845, and their relation to the present subject, will be referred to in a subsequent part of the paper.

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In looking at these accounts, the question likely to occur first to one desirous of ascertaining how far the Act of 1844 has operated upon the affairs of the Bank, and produced the effect intended, is this:—Has the amount of Bank of England notes in circulation fluctuated with the amount of bullion in the coffers of the Bank? If we accept that definition of the bank note circulation which is commonly in use, it needs little more than a glance to show that it has not.

For example, in the third weekly return made under the Act (21st September, 1844,) the bullion is stated at 15·1, the circulation at 20·6. Five weeks afterwards we find the bullion has fallen to 14·0, while the circulation has risen to 22·3. Thus, while bullion to the amount of £1,100,000 runs out, the note circulation is not reduced, but increased by £1,700,000.

Thenceforward, to the close of the year, the bullion rises slowly to 14·8, while the circulation falls, more rapidly, to 20·1.

At the opening of 1845 the bullion is 14·8, and the circulation 20·6. At the end of the first three months (29th March) the bullion has risen to 16·2, and the circulation is very nearly where it was, being 20·7.

Again, we find that on the 14th of June, 1845, the bullion is at 16·6, being the highest amount it reached during the two years, and the circulation 21·6, that the bullion thenceforward falls gradually till the 29th of October, when its amount is reduced to 14·0; and that during the same period the circulation rises from 21·6 to 23·3. This happens to be the highest amount the circulation reached during the two years; and it is remarkable that it was attained at a time when the bullion had been falling continuously for more than four months. While the bullion sank 2·5 the circulation rose 2·1.

A similar want of uniformity in the fluctuation of these two items is observable all through the accounts. The obvious conclusion is, that either those provisions of the Act, the purpose of which is to cause the circulation to fluctuate with the bullion, have not been in operation during these two years, or being in operation, have failed to produce the effect intended.

This view of the accounts favours the opinion of the opponents of the Act that it would be found ineffectual for its purpose of causing the circulation to fluctuate with the bullion. It is, however, to be observed, that the conclusion stated depends upon a particular definition of the word "circulation"—that namely which limits the term, as applied to Bank of England notes, to the notes in the hands of the public, excluding those retained in the Banking Department. The use of the term under this definition, for the present purpose, is justified by its having been similarly used, hitherto, both by the supporters and by the opponents of the Act. On the other hand, it is to be observed, that the separation of the Issue Department from the Banking Department appears to have been intended to place the latter in the same position, in reference to the Issue Department, as any other banking establishment in London, and therefore seems fairly to include the idea that the notes in the drawers of that department are as much in circulation as though they were in those of any other bank. If the word "circulation" be used in this sense, the question whether the circulation has fluctuated with the bullion must of course be answered in the affirmative.

But whether the affirmative thus obtained be conclusive as showing that the purpose of the Act has been fulfilled, depends upon one or two further considerations.

That, by the machinery described, the Bank must be prevented from issuing a single note in excess of £14,000,000 against which she shall not hold bullion, is self-evident. This, therefore, can neither be the proposition disputed by the opponents of the Act, nor the one which has been advanced by its supporters.

Again, if this definition of the bank note circulation be admitted, it follows that the Act can only check the operations of the Bank when those operations call for the actual use of an amount of notes exceeding the amount of bullion in the Bank plus £14,000,000.



If notes are retained in the Banking Department, it is clear they are retained quite irrespectively of the provisions of the Act, and only in the exercise of a discretion on the part of the Bank which the Act leaves perfectly unfettered.

It was also an avowed purpose of the authors of the Act to prevent the Bank being again placed in certain positions, undoubtedly dangerous, in which she has stood in times past, and into which she has been brought, as is asserted, through a want of due care in the exercise of the discretionary power entrusted to her *before* the passing of this Act.

The Act purports to cure the evil by taking from her the power she has misused.

But if the "circulation" which it is the purpose of the Act to make fluctuate with the bullion, includes every note out of the Issue Department, it requires but little examination of these tables to show that the scope still left to the voluntary operations of the Bank is wide enough to enable its managers to place the establishment in a position quite as improper, in reference to the maintenance of its credit, as any it has occupied during the period from which the instances of mismanagement most commonly adduced have been drawn.

In proof of this it may be sufficient to state, by way of comparison with the tables before given, some of the particulars of the Bank accounts under the two drains of 1836-7 and 1839; being those usually referred to as best illustrating the danger of leaving to the Bank the entire control of its business of issue.

Date of Weekly Account.	Deposits.	Securities.	Circulation.	Maximum limit of the Circulation, had the Act 7 & 8 Vict., c. 32, been then in operation.	Bullion.
1835.					
Sept. 22.....	13·4	27·1	17·3	20·2	6·2
Oct. 13.....	20·0	33·8	17·2	20·1	6·1
Nov. 10.....	17·9	31·2	17·3	20·6	6·6
Dec. 8.....	18·4	30·7	16·9	21·3	7·3
1836.					
Jan. 5.....	20·4	32·0	16·7	21·6	7·6
Feb. 2.....	15·2	28·8	18·3	21·6	7·6
March 1.....	13·9	27·2	18·1	21·9	7·9
„ 29.....	12·8	25·5	17·6	22·0	8·0
April 26.....	13·9	27·6	18·5	21·5	7·5
May 24.....	12·2	25·2	17·5	21·3	7·3
June 21.....	15·2	28·0	17·1	21·0	7·0
July 19.....	15·8	31·8	19·1	19·9	5·9
Aug. 16.....	13·1	29·0	18·5	19·4	5·4
Sept. 13.....	12·0	27·2	17·4	19·1	5·1
Oct. 11.....	15·8	30·7	17·1	18·9	4·9
Nov. 8.....	12·2	27·7	17·4	18·6	4·6
Dec. 6.....	14·8	31·0	17·0	17·9	3·9
1837.					
Jan. 3.....	16·6	32·4	17·0	18·2	4·2
Jan. 31.....	11·2	29·8	19·1	17·8	3·8
Feb. 28.....	10·0	27·2	18·0	18·0	4·0

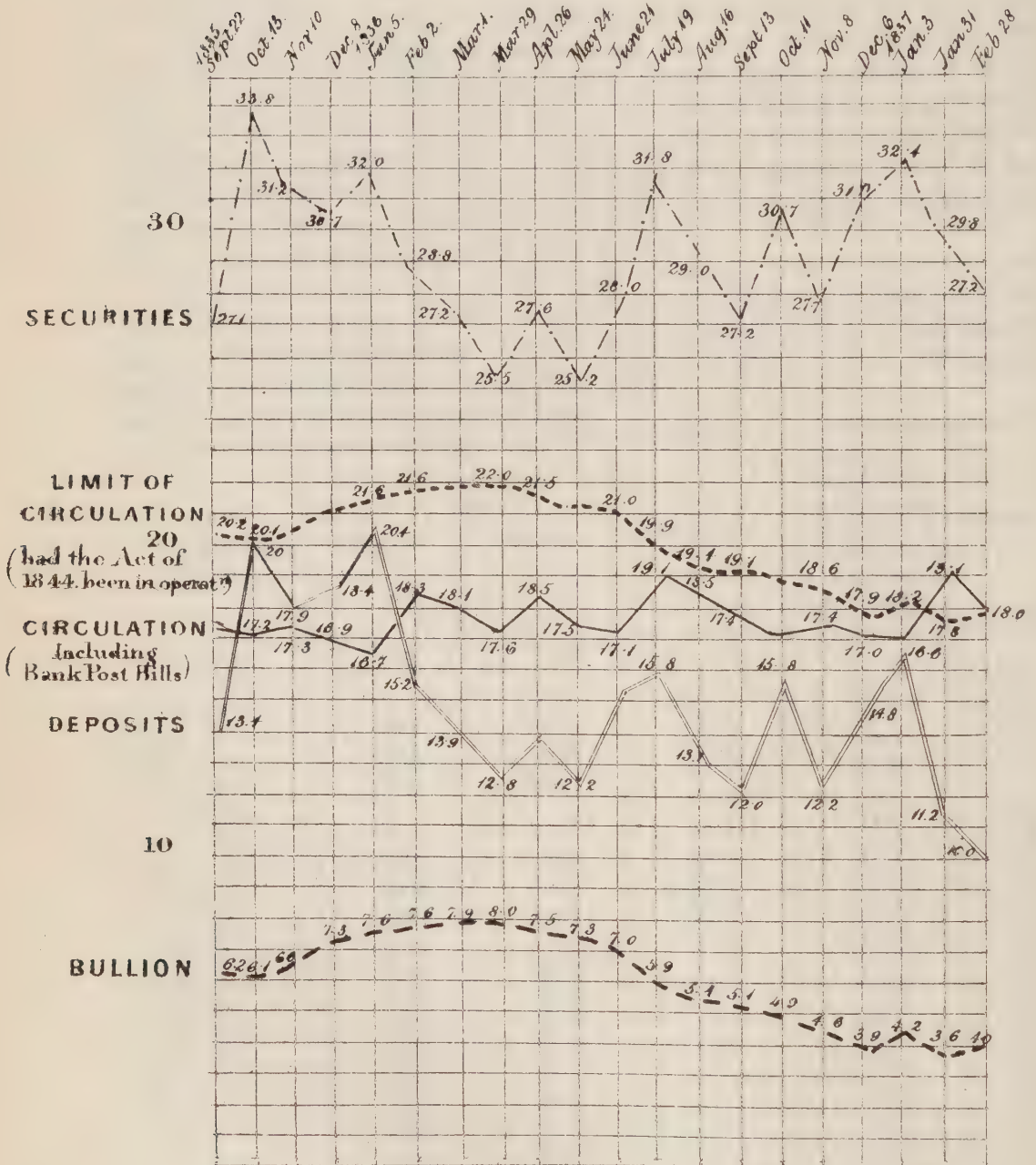




Nº 2.

# DIAGRAM

TO ILLUSTRATE THE ACCOUNTS  
OF THE BANK OF ENGLAND UNDER THE DRAIN OF  
1836.



The preceding table shows the state of the Bank accounts at intervals of four weeks, from September, 1835, to February, 1837, including, as will be observed, a period of eight months, from the end of March to the beginning of December, 1836, during which the bullion sank from £8,000,000 to £3,900,000. In addition to the four items furnished by the Bank accounts, as then published, a fifth is given, showing the maximum limit which would have been imposed upon the amount of notes out of the Issue Department, had the present Act been then in operation.

The most striking feature in this series of returns is the great increase, in the autumn of 1835, and during the greater part of 1836, of the amount of *deposits* and of *securities*. The circulation was little affected, if we except the usual increase for a short time after the payment of the dividends in January and July. The bullion rose steadily till the end of March, 1836, and fell rapidly during the remainder of the year\*.

The increase of the deposits, as is generally known, arose partly from the Bank having, in 1835, agreed to allow interest for the large sums accumulated in her hands by the East India Company when the commercial affairs of the Company were being wound up, and partly from the reception of deposits on account of a loan of £15,000,000 contracted by the Government about the same time (under the Act 5 and 6 Wm. IV. c. 45, 31st August, 1835,) preparatory to the payment of the Slave Compensation.

The Bank deemed it proper to extend her advances with this extension of her means. The propriety of her doing so is not here in question. The extent and facility of her advances during the latter half of 1835 and the first half of 1836 is asserted to have led to, or materially aided, the very serious reduction of her bullion shown at the close of 1836. And the present question is simply whether, had the Act of 1844 been then in operation, it would have prevented the Bank taking the course she did\*.

The table given above shows that the whole circulation out of the walls of the Bank did not exceed the limit which would have been fixed by the Act, until late in January, 1837, when the bullion had already reached nearly its lowest point. And if it be observed that in the "circulation," as here stated, is included the *seven days' bills*, the amount of which, though not stated, may be safely estimated at £600,000 or £700,000, it will be seen that down to the close of 1836 the Bank, had the present Act been in operation, would have complied with its provisions, and have held at least a million of reserve in the Banking Department. But in truth it would not be just towards the managers of the Bank at that period to take this extreme view of the case. Assuming that they had unduly extended their advances during the autumn of 1835 and the spring of 1836, it is to be observed that in July 1836 they changed their course. They then raised the rate of interest to  $4\frac{1}{2}$  per cent., and in August to 5 per cent. And the question at once arises—Would the Act have caused an earlier or more effective restriction of the advances? The facts seem to answer this question with a decided negative. When the rate of interest was

\* See Diagram No. 2.



raised in July, the bullion amounted to nearly six millions, and the drain had only run about half its course, while the "circulation," even including the seven days' bills, and notwithstanding its expansion by the payment of the July dividends, was considerably within the limit imposed by the Act of 1844, and by the end of the year was brought still more within that limit.

It seems evident, therefore, admitting to the fullest extent that the indiscretion of the Bank Directors caused the drain of 1836, that it would not have been prevented by the strictest enforcement of the provisions of the Act 7 and 8 of Vict. c. 32.

But the instance of want of uniformity between the circulation and the bullion most commonly brought forward to justify the restrictions of the Act of 1844 is exhibited in the Bank accounts for 1839, which are stated in the following table in the same manner as in the one preceding.

Date of Weekly Account.	Deposits.	Securities.	Circulation.	Maximum limit of the Circulation, had the Act 7 & 8 Vict., c. 32, been then in operation.	Bullion.
1838.					
Nov. 27.....	8·8	19·5	17·8	23·5	9·5
Dec. 24.....	11·0	21·5	17·5	23·5	9·5
1839.					
Jan. 22.....	9·8	23·9	19·3	21·8	7·8
Feb. 19.....	7·9	22·2	18·4	20·8	6·8
Mar. 19.....	7·7	21·6	17·5	20·3	6·3
April 16.....	8·5	25·2	18·8	18·7	4·7
May 14.....	7·3	24·0	18·3	18·1	4·1
June 11.....	6·7	22·8	17·3	17·9	3·9
July 9.....	12·5	30·6	18·6	17·4	3·4
Aug. 6.....	7·7	27·0	18·4	16·4	2·4
Sept. 3.....	6·1	24·6	17·8	16·4	2·4
Oct. 1.....	5·5	23·0	16·8	16·5	2·5
Oct. 29.....	6·3	24·1	17·3	16·5	2·5
Nov. 26.....	5·6	20·9	15·9	17·4	3·4
Dec. 24.....	8·0	22·0	15·8	18·5	4·5

A review of the manner in which the Bank exercised her discretion in making advances during the period covered by this table certainly leads to the inference that the drain was accelerated by it. In February, 1838, the current rate of interest for the best bills was about  $3\frac{1}{2}$  per cent. At that time the Bank rate, having previously been 5 per cent., was reduced to 4. For some weeks afterwards the demand for money declined; and in May, 1838, the Bank rate being 4 per cent., that current out of doors did not exceed 3. After May the demand for money steadily increased. In November the market rate of interest had risen to a level with that of the Bank—4 per cent. And then came that course of conduct on the part of the Bank which has been so much blamed. On the 23rd of November a notice was issued offering advances till the 23rd of January at  $3\frac{1}{2}$  per cent.; and that, not only

N<sup>o</sup> 3.

*To Illustrate the*  
**ACCOUNTS OF THE BANK OF ENGLAND,**  
*Under the Drain of 1839.*

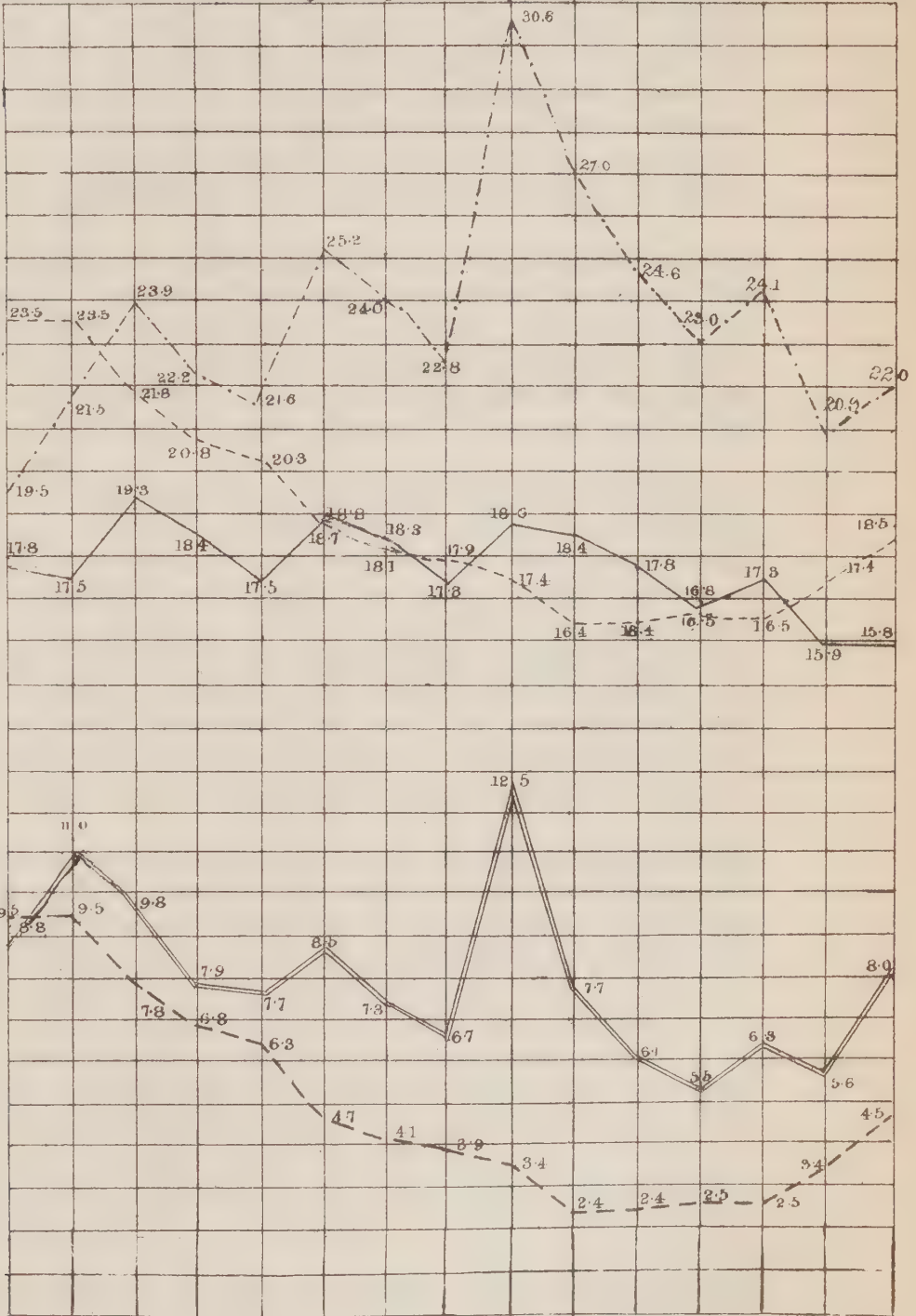
1838  
 30 Nov 27, Dec 24, Jan 22 Feb 19, Mar 19, Apr 16, May 14, Jun 11, July 9, Aug 6, Sept 3, Oct 1, Oct 29, Nov 26, Dec 24.  
 1839

**LIMIT OF  
 CIRCULATION**  
 had the Act of 1844  
 been in Operation.

**20  
 SECURITIES**

**CIRCULATION**  
 Including  
 (Bank Post Bills.)

**10  
 BULLION  
 DEPOSITS**



J. Aresti Litho. 56. Greek Street, Soho





upon Bills of Exchange, but upon Exchequer Bills, East India Bonds, and other approved securities. As this made the Bank rate of interest lower than that current out of doors, it was immediately followed by a large increase of the securities. Thenceforward, through the first months of 1839, while the current rate of interest went on rising, the foreign exchanges declining, and the bullion running out, the Bank continued her advances under the notice of November. On the 28th of February another notice appeared, not raising the rate, but continuing the terms of the notice of November till the 23rd of April. Now mark the result upon the column of securities. When the rate of interest was reduced in November the securities were 19·5. In the weekly return of the 9th of April they reached 26·6, showing an increase of more than £7,000,000. During the same period the bullion had fallen continuously from 9·5 to 5·2, showing a loss of £4,300,000\*.

On the 16th of May the Bank took the first step towards checking the drain by raising her rate of interest from  $3\frac{1}{2}$  to 5 per cent. But it was still lower than the current rate. On the 20th of June the Bank rate was raised to  $5\frac{1}{2}$  per cent., and again limited to Bills of Exchange. On the 13th of July the dead-weight annuity was offered for sale; and on the 1st of August the rate of interest was further raised to *six* per cent.

The question now presented is, whether, had the Act of 1844 been then in operation, it would have prevented the Bank from lowering her rate of interest and increasing her securities in the manner shown, or would have compelled a restriction of her advances at a period so much earlier, and in a manner so much more gradual and decisive, as to have averted the necessity for the extraordinary pressure upon commercial credit exerted by the Bank in the latter months of 1839.

The table last given shows that, had the Act been then in force, the conduct of the Bank would not, down to a period so late as the 19th of March, 1839, have been in any manner contrary to its provisions†.

At that period, if we allow £700,000 for the amount (not published) of the seven days' bills, included in the return of the circulation, the reserve of notes and coin retained in the Banking Department would have been about £3,500,000, an amount amply sufficient, according to the usage of the Bank, as the deposits were then only £7,700,000. Yet at this time the bullion had already fallen from £9,500,000 to £6,300,000; all the principal causes of the drain were fully and palpably in operation; and the imputed indiscretion of the Bank Directors had been carried nearly to its full extent. It is therefore apparent that the drain of 1839, so far as it was due to any want of caution on the part of the Bank down to the middle of March, 1839, would not have been affected by the provisions of the Act of 1844, had it then been in operation.

And indeed a reference to the proximate causes of the drain in question, as they have been explained by the supporters of the Act themselves, tends strongly to show that it was not so much an arbitrary limit upon the mere present conduct of the Bank that was called for as a regard to the shadows of coming events; which, as it could

\* See Diagram No. 3.

† Ibid.



only result from a process of reasoning, could not have been supplied by previous legislative enactment.

The Directors were blamed for a dangerous state of the ship—not in reference to the then present weather, but in reference to that which they might have foreseen. Passing events boded a coming storm. But it is apparent that the most significant of these events would not have effected in any appreciable degree the index of danger furnished by the Act of 1844. Apart from the knowledge that the Bank rate of interest was, from November, 1838, to March, 1839, *below* that of the market; and that the securities were increasing to an unusual extent (of neither of which circumstances the Act would have taken cognizance) there were the important facts, then well known, that the harvest of 1838 had been greatly deficient, and that large and sudden importations of foreign grain were being made during the autumn of that year and the spring of the next, which, under the circumstances, could not fail to have a depressing effect on the foreign exchanges. These facts, known to the Bank Directors, loudly counselled caution; but not materially affecting any item of the Bank accounts, as limited by the machinery of the Act of 1844, they could have had no effect in calling the restrictions of that measure into play. That from the beginning there was danger impending, of a heavy and palpable description, is evident. But it seems equally clear that to meet the danger required the forethought of intelligent men—not the restrictive mechanism of an Act of Parliament.

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A careful consideration, then, of the Bank accounts given in the above tables, in conjunction with those of the twelve years immediately preceding, which embrace all the more remarkable instances of danger charged by the supporters of the Act of 1844 to the indiscretion of the Bank, appears to lead to the conclusion that the provisions of that Act are not sufficient to prevent the recurrence of similar events.

It is apparent that whenever danger has arisen which could be justly attributed to the conduct of the Bank, it has been traceable to an undue expansion of her securities; or, in other words, to a reduction of the reserve held against *her liabilities to pay in gold on demand*, to an amount dangerously small. These liabilities include the notes and bills in circulation and the deposits. But the Act embraces only a part of them—the *bank notes*. The deposits and bills are left untouched. These, and the reserve held against them, the Bank is therefore still at liberty to deal with as she thinks proper. And as the use of deposit accounts extends year by year with the growth of our commercial transactions and the more scientific management of their details, the power of the Bank to increase her advances and liabilities in this direction may be expected also to increase.

It is well known that bills may be discounted, and liabilities to pay in gold on demand be incurred, by the granting of deposit credits as readily and effectually as by the issue of bank notes, and that such credits may often be used more conveniently, and quite as efficiently, by way of transfer from one account to another, as by drawing out notes or coin. And thus the Act of 1844, though it effectually provides for the payment in gold of every note issued to the public in excess of £14,000,000, only provides for the meeting of a portion of

the liabilities of the Bank to pay in gold on demand ; and a portion, too, which may sometimes at the will of the Bank become the smallest.

It follows that by indiscretion in the Banking Department—an improper increase of the securities, and diminution of the reserve against the total liabilities to pay on demand—the establishment may at any time be placed in a position as dangerous as any it has been placed in in times past.

The nature and extent of the discretion thus left to the Bank is very clearly illustrated in the tables before us by the state of her accounts during the extraordinary expansion of her banking business in the early part of 1846, by the reception and management of the railway deposits. The amount paid into the Bank of England upon this account in the previous year (1845) was about £3,444,000; but as the bank rate of interest was held rather above the current rate, and money was abundant, only a portion of this amount was advanced upon securities, the remainder going to increase the reserve. The amount paid in on account of railways in 1846 was £11,396,000; and as the Bank rate of interest was kept at  $3\frac{1}{2}$ , and the current rate was from 4 to 5 per cent., what was added to the deposits went to increase the securities. Whether the course taken by the Bank in the disposal of these deposits was wise or unwise is, of course, not here in question. But the fact that it *was* taken proves that the Bank retains, under the Act of 1844, that discretionary power in the use of any large addition to her deposits, her exercise of which was found fault with in 1836-7, when she held the deposits on account of the East India Company and the Slave Compensation Loan.

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The following statement places in a striking point of view the result of the discretionary extension of the advances of the Bank during the two years under review, as affecting *the proportion of the reserve to the deposits* only.

By the return of 3rd May, 1845, the deposits, public and private, amounted to £13,067,000—the public deposits being £2,712,000, and the private £10,355,000. The reserve, in notes and coin, was £8,468,000.

On the 21st of June, 1845, the deposits were £17,098,000—the public deposits being £6,951,000, and the private £10,147,000. The reserve was £10,424,000.

On the 6th of December, 1845, the deposits were £17,132,000—public, £8,110,000; private, £9,022,000. The reserve was £6,471,000.

And on the 28th of February, 1846, the deposits were £24,943,000—public, £6,296,000; private, £18,647,000. The reserve was only £7,744,000\*.

It will be observed that these four periods have been selected so as to exhibit every material variation of the proportion of public to private deposits. In the first instance the public deposits are unusually *low*; in the second, of a *medium* amount; in the third, *high*; and the private deposits do not much vary from a common average. In the fourth instance the public deposits are of a medium amount, and the private unusually high. The following figures show the proportion of reserve to deposits at each period:—

\* See Diagram No. 4.



	Deposits.	Reserve.	Proportion of Deposits held in Reserve.
1845.			
May 3 .....	13·0	8·4	64 per cent.
June 21 .....	17·0	10·4	61 „
Dec. 6 .....	17·1	6·4	37 „
1846.			
Feb. 28 .....	24·9	7·7	30 „

The latitude of discretion here shown in the reduction of the reserve is nearly, if not quite, equal to that exhibited by the Bank at any period within the twelve years immediately preceding the passing of the Act of 1844 ; and there is nothing upon the face of that measure, or in its practical operation, which opposes any obstacle to a still further reduction of the reserve, should the Bank think proper to make it.

The bearing of the Act upon the “circulation,” in the sense in which that term was commonly used before the measure was introduced, and also in the sense in which it includes every note out of the Issue Department, having been thus tested, it only remains to mark its bearing upon the course of those commercial transactions which are known to require the use of a circulating medium, as viewed entirely apart from any particular definition of the Bank “circulation.”

And here, in the first instance, our attention is irresistibly attracted by the railway speculations during the period under review.

Between March and September, 1845, joint stock speculations for the immediate investment of capital were set on foot, involving a larger aggregate amount than had ever before been so involved in this country. The amount to raise which, for railways alone, the sanction of Parliament was actually applied for in the following Session, exceeded 340 millions. And if we include all the other schemes in which scrip or letters of allotment were actually selling in the market at a premium in July, August, and September, 1845, the amount cannot be estimated at less than 500 millions.

Many of the schemes of 1845 reached a high premium within a few weeks ; and all those first in the market, and having any substantial merit, were raised considerably above their true value. For instance, the Leeds and Thirsk Railway—£50 shares, with only the deposit of £2 10s. paid—were selling in March at £3 10s. ; in September, at £23 15s. ; and in November at £4 15s. per share. Again, the Bolton, Wigan, and Liverpool—£40 shares, with £4 paid—were selling in January, 1845, at £4 10s. ; in September, at £42 15s. ; and in December (when £9 had been paid), at £20 per share. If we assume an average premium of £10 per cent. upon the schemes then in the market, the property temporarily created by these speculations (and the repeated purchase and sale of which, on commission, furnished profitable employment to some thousands of brokers) must have been at least 50 millions.

And to this there is to be added an increased value during the same period of the shares in the established lines of railway. For instance—

The Midland Stock—amount £4,180,000—was selling in January, 1845, at 114 per cent. ; and in July at 188 per cent., showing a rise

of 74 per cent., and an increase in the aggregate value of the stock of £3,098,000.

The Great Western—share capital issued £8,160,000—£100 shares selling in January, 1845, at £156; and in July at £228; and (allowing for a call of £5 per share in the interim) showing a rise of 67 per cent., and an increase in the aggregate value of the shares of £5,467,000.

The Manchester and Leeds—share capital £4,660,000—£100 shares selling in January, 1845, at £126; and in August at £215, showing a rise of 89 per cent; and an increased value in the aggregate of £4,147,000.

The average increase in the value of £100 shares in these three lines was £76; and the total increase of value in August and September was upwards of 12 millions.

To determine to what extent the circulating medium of the country was actually expanded under these speculations might, with the existing means of information, be found extremely difficult; but that it was very great cannot be doubted; and its probable amount may be strikingly illustrated, though it cannot be proved. For instance, if we accept the estimate of the whole annual income of the inhabitants of Great Britain, given in a recent pamphlet by Mr. Smee, of the Bank of England, we may assume that it is about £370,000,000. The whole annual expenditure of the country on consumable commodities must, of course, fall within this sum, in its ultimate form. And we may safely assume that the whole amount of property the subject of purchase and sale, say within one week, at any period of the year, in reference to the annual production and consumption of the country, is considerably less in value than £370,000,000; and as it is well known that the transactions of this class form, by far, the larger part of all those in which the use of the circulating medium is necessary, it seems clear that the additional transactions connected with the purchase and sale of Railway property in 1845 must have caused, for the time, an addition to the aggregate amount of the circulating medium called into use, very large in proportion to its ordinary amount.

But it will be seen, on reference to the tables, that during those months in which the purchases and sales of railway property were most numerous and extensive, while everybody was buying and selling shares, and the current rate of interest was only  $2\frac{1}{2}$  per cent., that portion of the circulating medium which consisted of Bank of England notes was but very slightly, if at all, increased, and that it reached its greatest amount when the prices of shares were lowest—when everybody had ceased to speculate—when the number and amount of current transactions were reduced to the lowest point by discredit, and the current rate of interest for first-class bills had risen from  $2\frac{1}{2}$  to  $4\frac{1}{2}$  per cent.

It seems to follow, therefore, either that an increase in the amount of the circulating medium is not necessary to support the most extensive speculations, or that the amount of Bank of England notes in circulation affords no index to the amount of the circulating medium; either of which conclusions is of course fatal to the theory upon which the Act of 1844 is founded.

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*Statistics of Prussia.* By BERNARD HEBELER, ESQ., K.C.R.E.,  
F.S.S., *His Prussian Majesty's Consul-General.*

[Read before the Statistical Society of London, 16th November, 1846.]

THE kingdom of Prussia, as a member of the German Confederation, is the second in rank; and its influence, moral and physical, has assigned to it a position in the scale of European empires which proudly declares its great importance. If we consult the pages of history, and compare the present position of Prussia with what its nucleus, the district (Mark) Brandenburg, was in 1417, we cannot but be struck with the progress it has made. In that year Margrave Frederick I. bought Brandenburg for a sum with which at present a moderate landed estate is purchased. Its area, at that period, consisted of about 750 square miles, with scarcely half-a-million of inhabitants; while at present Prussia comprises in its whole extent nearly 110,000 English square miles, inhabited by 15,536,734 souls.

According to its population, Prussia is the fifth state in Europe; and if we assume that Prussia is = 1, the other leading European States would be of the following value:—

	Population.
1. Russia in Europe, including Poland.....	54,726,207=3·525
2. Austria .....	35,877,864=2·309
3. France .....	34,230,178=2·203
4. Great Britain .....	26,991,517=1·737
5. Prussia .....	15,536,734=1·
6. Turkish Empire.....	12,653,000=0·814
7. Spain .....	12,087,000=0·778
8. Sicily .....	8,203,687=0·528
9. Sardinia....	4,650,368=0·299
10. Bavaria....	4,440,327=0·286

Berlin appears, from its early existence, to have been the central point whence its aggrandizement spread towards the four quarters of the compass. Towards the east, Prussia Proper was added to it; towards the west, the Rhenish Provinces, and within our own time the province of Saxony; towards the north, Pomerania; and to the south the rich and fertile province of Silesia became subject to the Prussian Crown.

Inheritance, or marriage, or the fortune of war, added to the Mark Brandenburg sixty-six additional districts, all of which were once independent States; the province of Saxony was added after the late war, and the limits of Prussia, as at present constituted, were solemnly acknowledged by the European Powers at the Treaty of Paris in 1815, and confirmed at the Congress of Vienna.

It may now be said to consist of two separate divisions, the first of which I will call the *Eastern* division.

This division comprises the provinces of Prussia, Posen, Silesia, Pomerania, Brandenburg, Saxony, extending between 49° 7' and 55° 52' northern latitude, and from 9° 55' to 22° 50' eastern longitude (from Greenwich); the *second* or *Western division* comprises the *provinces* of Westphalia and the Rhenish Provinces. It is situate between 49° 8' and 52° 30' northern latitude, and 6° 53' and 9° 22' eastern lon-

gitude. Separate from the Prussian monarchy lie the principalities of Neufchatel and Valendis.

The Eastern portion is a part of the great plain of Eastern Europe, and comprehends an area of about 91,620 square miles, or about 7,000 square miles more than the surface of Great Britain.

The Western division consists of an elevated table-land and low plains. Its area is about 18,550 square miles, or about three-fourths of the area of Scotland. The whole Prussian Monarchy has a surface of 110,230 square miles, which is about 2,000 square miles less than the British Islands.

A territory so extensive as Prussia, and having mountain ranges rising in one point (the Schneekopf) to 5,500 feet, has naturally different temperatures. Berghaus, in his "Physical Atlas," has divided the climatology of Prussia into three sections, according to which the Western division, with a mean elevation of 250 feet above the sea, has a mean temperature for the year of  $49\frac{1}{2}^{\circ}$  F., and during the winter of  $35^{\circ}$  F. The Central division, with an elevation of 210 feet,  $48^{\circ}$  F. and  $33^{\circ}$  F. The Eastern division, with only 40 feet elevation above the sea,  $43^{\circ}$  F. and  $26^{\circ}$  F. The mean annual temperature is in London  $1^{\circ}$  F. higher than that of the Western division, and exceeds by nearly  $8^{\circ}$  that of the Eastern. The winter is severer in Prussia than in London; the summer, however, is warmer than in the British metropolis by nearly  $2^{\circ}$ .

The Prussian Monarchy does not possess a great variety of natural productions, but its agriculture forms the chief source of its national wealth. Its manufactures consist of linen, chiefly in Silesia, woollen, broadcloths, cotton goods, silk, iron and copper ware, glass, porcelain, earthenware, articles of gold and silver, bijouterie, tobacco, and sugar, chiefly of beet-root, with breweries and distilleries of spirit.

The situation of the provinces of the Prussian Monarchy favours the commercial enterprises of the people, actuated as they are by an active industry.

The Eastern division occupies the centre of Europe, and possesses the natural outlets of the rivers Elbe, Oder, and Vistula; and the Western division is bounded by the Rhine, and extends along the coast of the Baltic. The trade is chiefly carried on with Austria, Holland, and the northern States of Denmark and Sweden, but it extends likewise to the East Indies, China, Brazil, and the former Spanish provinces in South America, the United States, &c.

Prussia occupies the first position in the great German Commercial League, which was established in 1831 for the object of free-trade among the German Confederation, and to subject the articles of foreign manufacture to such restrictions as were rendered necessary for the protection of their own manufactures and the increase of their revenues.

The whole population which is comprised in the "Deutsche Zollverein" amounts to 28,498,625 souls, to which Prussia bears a proportion of 54.290 per cent.

The great attention which is paid in Prussia to national education is proverbial. Elementary, Sunday, and infant schools are supported by Government for the instruction of the lower classes; collegiate institutions and universities for the higher classes.



Every subject of Prussia, provided he be sound of body and in health, is obliged to serve his country, in the regular army, for three years. They enter the standing army in their twentieth year, where they serve three years, and are then discharged for two years. If necessity, however, should require it, they are liable to be called out as the reserve. After this period they are enlisted in the landwehr of the first ban, where they remain till their thirty-second year, and are called out every year; the first year for a fortnight, and the next year for four weeks, and so in each alternate year, for exercise; but in the case of war they stand on the same footing as the regular army.

The second ban includes all men who are capable of bearing arms, and who are above thirty-two and below thirty-nine years of age. They are only called out during war, and are employed for garrisons in towns and fortifications. The landsturm consists of men above thirty-nine years, and serve, in case of necessity, as a "*levée en masse*."

The army consists of eight corps, besides the Guards, and amounts during peace to 108,000 men and 139,000 landwehr; but in case of necessity, Prussia can call 500,000 men under arms, the greater number of whom have served in the regular army, and are trained soldiers.

The whole Prussian Monarchy is divided into eight provinces, and these into twenty-six Government districts, including Berlin. The constitution is an unlimited Monarchy, hereditary in the male and female line. As a member of the German Confederation, its contingent to the army is 79,234 men, and its contributions to the expenses of the Diet is annually 2,000 florins.

From these hasty remarks the importance of Prussia as a monarchy will be evident. I have considered them necessary to introduce a work which reflects the greatest credit upon its author, and upon the department from which it emanates. I allude to the Statistical Tables of the Prussian Monarchy, compiled from the official documents of the year 1843, edited by W. Dieterici, Director of the Statistical Bureau at Berlin, and published in 1845.

The usefulness of a department of that description has been sufficiently tested in England, where the Statistical department, under its present chief officer, has furnished data that have been the base upon which some of the great legislative measures of our time have been founded. Prussia did but follow the example of England, France, Belgium, &c., and, under the direction of its former chief, the present Privy Councillor Hoffman, its statistical bureau has acquired a celebrity acknowledged by foreign nations.

The Statistical Bureau in Berlin, since the time of Hoffman's direction, has been directly under the Ministers of State. It was connected by Royal Order, in June 1844, with the Board of Trade or Royal Chamber of Commerce, but without any change taking place in its internal structure.

I am well aware of the difficulty of analyzing such a work as this of M. Dieterici. Under him it has assumed a new form. On former occasions selections were made, and the public was only informed in part of the materials which the Statistical Bureau possessed; but the tables given to the world by M. Dieterici are, according to his own statement, the result of the Statistical Census at the end of the year 1843, as ascertained by the Royal District Governments and Magis-

trates, and entered into the general tables only after all doubts, if there were any, had been removed by inquiries.

These tables are thrown into five great divisions, exhibiting,

I. The number of houses, the population, and the number of cattle.

II. The civil and military population of the Prussian Monarchy.

III. Hospitals and medical establishments.

IV. Churches and schools.

V. Trade and commerce.

The information which these tables contain is obtained after every triennial period.

### FIRST DIVISION.

The first table of consequence is a statistical table which exhibits the population of Prussia in the different Government districts, classified according to their sex and age, whether living in matrimony, their religion, and the number of deaf and dumb. With this table is connected a statement of the number of cattle. It is not my object to enter into details which would amount to a literal translation of the original work; I have consequently considered it much preferable, for the purpose of giving an exposition of the actual state of Prussia in 1843, to dwell on the general results which M. Dieterici offers in his laborious production.

The Table No. II. offers therefore the value of each column as it respects the whole monarchy, from which, however, Neufchatel and Valendis are excepted.

The number of horses, cattle, sheep, &c., is exhibited in Table No. III.

The increase of the population from 1816 to 1843 inclusive, amounts to 5,122,734, according to the following data.

The population consisted

	Increase in 3 Years.	Increase per Cent.
in 1816 of 10,349,031		
„ 1819 „ 10,981,934 .....	632,903 .....	6.1
„ 1822 „ 11,664,133 .....	682,199 .....	6.2
„ 1825 „ 12,256,725 .....	592,592 .....	5.08
„ 1828 „ 12,726,110 .....	469,385 .....	3.8
„ 1831 „ 13,038,960 .....	312,850 .....	2.5
„ 1834 „ 13,509,927 .....	470,967 .....	3.6
„ 1837 „ 14,098,125 .....	588,198 .....	4.4
„ 1840 „ 14,928,501 .....	830,376 .....	5.9
„ 1843 „ 15,471,765 .....	543,264 .....	3.7

According to simple division the annual increase would be during the 27 years, 189,731. The increase, however, has not progressed in geometrical proportions. M. Dieterici draws attention to the discrepancy of the larger increase in the earlier years, and contends that Malthus's principle of a geometrical progression is fallacious. He doubts the correctness of the first census in 1816 and 1819, and observes that the ravages of the Asiatic cholera contributed to the smaller increase in 1831 and 1837. The Prussian monarchy appears to increase, when neither uncommon mortality nor famine prevail, at the ratio of 3 to 4 per cent. triennially, or about 180,000 to 190,000 souls.



## The number of births surpassed those of deaths,

				Excess of Immigration over Emigration.
From 1816 to 1819 inclusive, by	455,759	.....	177,144	
„ 1820 „ 1822 „ „	592,514	.....	89,685	
„ 1823 „ 1825 „ „	562,904	.....	29,688	
„ 1826 „ 1828 „ „	422,208	.....	47,177	
„ 1829 „ 1831 „ „	241,664	.....	71,186	
„ 1832 „ 1834 „ „	317,054	.....	153,913	
„ 1835 „ 1837 „ „	446,596	.....	141,602	
„ 1838 „ 1840 „ „	486,937	.....	343,439	
„ 1841 „ 1843 „ „	524,669	.....	18,595	

Our author does not think that the whole number classed in the column representing the surplus of immigration above emigration, can be attributed entirely to immigration, and he suspects that a more accurate enumeration of the population may have contributed towards these results.

It is considered that the emigration between the years 1840 and 1843, amounted to 31,784 souls, the immigration to 50,379. The province of Prussia Proper offers an immigration of 10,405 persons, while it does not appear from the official return that a single person left the province. Posen offers an immigration of 12,355 persons. In Westphalia the movement appears very remarkable; 14,098 entered the province, and 8,474 left it. In Saxony 45 immigrated, and the comparative large number of 4,909 left the province. The greater number of emigrants proceeded to distant parts of the world; and to America especially there emigrated from the district Minden 4,061, and from Trier 5,886.

The emigration has since greatly increased, and has attracted the attention of the Government.

It is only by comparing the number of inhabitants with the area which they occupy, that we form a proper idea of the real state of the population. The following Table (No IV.) will give a statement of the actual number of inhabitants on each square mile. I have added a column, in which the Prussian square mile has been assumed at 21 English square miles, which consequently shows the population in the different provinces for an English square mile.

In the aggregate there are 3,045 souls in the Prussian Monarchy on each Prussian square mile; 3,099 in the German Provinces of Austria; 3,212 in Bavaria; 4,878 in Great Britain; 7,858 in Belgium.

Among the Prussian Provinces, Pomerania is the least thickly inhabited; the Rhenish Provinces the most. The former has only 1,926 on each square mile, the latter 5,500; and the district of Dusseldorf, with an area of 98 square miles, has a population of 6,718 souls on each square mile.

In 1843 the kingdom had 979 towns, inhabited by 4,263,413 persons, and there resided in the country 11,208,352 persons, so that for every 100 persons living in the towns, there were 263 in the country. There were 28 towns, with a population of more than 15,000. In Berlin there were 355,149 inhabitants. Vienna, according to Becher, had in 1840 only 340,000 inhabitants. Breslau

occupies the fifth place in the scale of German towns; it possessed in 1843, 103,204 inhabitants.

The next Table (No. V.) is of too great interest to be omitted; it refers to a comparative statement of ages and sexes. The results of this table prove that there is a surplus of 29,689 females over males. It is remarkable that this surplus shows itself only from the 17th year upwards. A much larger number of boys are born than girls, and their number preponderates to the 17th year: from thence the numbers decline, and from the 45th year upwards, this preponderance amounts to 107 females to 100 males.

The young man leaves the paternal home at the 17th year, or even earlier, and a great number are engaged as sailors, or as travellers in foreign lands; but it does not appear that this altogether accounts for the discrepancy—there appear to be physical causes which shorten the life of the male, and grant a more advanced age to the female.

These differences likewise exist in other states. In Great Britain to 100 men there are 104.493 females, in France 100 to 104.3, in Austria 100 to 103. In Prussia the difference (100 to 100.385) is therefore less than in any of the above-mentioned states.

The general Table (No. II.) shows amongst persons living in the married state, a surplus of 7,697 females. This can only be ascribed to the circumstance, that at the time when the census was taken the husband was absent from home.

There are in Prussia 4,790,716 females above 16 years of age, of whom 2,570,390 are married, and 2,220,326 unmarried; among 100 females, therefore, above 16 years, 46.3 are unmarried.

In 1837, among one million of inhabitants, 167,572 were living in matrimony; in 1843 only 166,134.

With regard to the religions which the Prussian subjects profess, there appear to be among a million of inhabitants—

609,427.0	Protestants.
376,177.1	Roman Catholics.
121.4	of the Greek Church.
925.1	Mennonites.
13,348.8	Jews.
0.6	Mahomedans.

---

1,000,000

The districts of Gumbinnen, Königsberg, Potsdam, and Berlin, Frankfort, Stettin, Köslin, Stralsund, Liegnitz, Magdeburg, Merseburg, and Erfurt, are mostly inhabited by Protestants. In the provinces of Posen, Westphalia, and the Rhine, the Roman Catholic religion preponderates. The greatest number of persons belonging to the Greek Church inhabit 10 villages in the district of Gumbinnen, in Prussia Proper.

The Jews constitute  $1\frac{1}{3}$  per cent. of the whole population of Prussia. The greater number inhabit the province of Posen, where they compose 6 per cent. of the population. In Saxony on the other part, there are very few. Dr. Hoffman has given a very illustrative statistical account of the Jews in Prussia, of which a translation is inserted in the ninth volume of the Journal of the Statistical Society,



to which I refer for details. M. Hoffman observes that the number of Jews who were converted to Christianity, amounted usually during a period of three years, to from 300 to 400.

The last census gives us the following details. In 1841 there were converted to the

	Protestant Church.	Roman Catholic.	Total.
	91 .....	14 .....	= 105
1842 .....	105 .....	17 .....	= 122
1843 .....	96 .....	24 .....	= 120
			<hr/> 347

Out of 206,529 Jews who inhabit Prussia, scarcely 2 in 1000 adopted Christianity, or more accurately 0·17 per cent. were converted to the Christian faith.

The number of deaf and dumb and blind persons is comparatively small in Prussia; there were in 1843, among 100,000 inhabitants, 74 deaf and dumb, and 66 blind. Generally speaking, it appears the male sex is more subject to these calamities than the female.

The Table, No. VI., which exhibits the number of private dwellings, would give, if we consider the whole monarchy, a house for every 8·25 persons; in Berlin this proportion is increased to 21·59 persons. The sum which was insured upon houses in the different fire insurance companies amounted in 1843 to 1,103,454,496 Prussian dollars, (equal to about 163,500,000*l.* sterling).

The rearing of horses and cattle has considerably increased, still that increase bears no proportion to the increase of the population. The increase in horses amounts, between 1816 and 1843, to 321,293. In the latter year the numbers stood, in proportion to the population, as 1 to 9·89, that is, a horse to every 9·89 men; in 1825 the proportion was as 1 to 8·74. If we except calves and include bulls, oxen, cows, and young cattle, we have, in 1843, the proportion of 1 to 3·07, (in 1816 it was 1 to 2·58). In France the proportion is 1 to 3·74, in Austria 1 to 3·24. Colquhoun estimated it, in 1815, in Great Britain, at 1 to 1·65.

It appears that in Prussia, in 1843, each cow had to furnish milk for 5·38 persons, in 1825 only for 4·97 persons.

The rearing of sheep is carried on with the greatest success in Prussia.

In the provinces of Saxony, Brandenburg, Silesia, and Pomerania, there are from 400 to 500 sheep upon each square mile. In the districts of Stettin and Breslau there are above 1,600 merinos on each square mile, or in both districts 367,533. The number of all kinds of sheep averaged, in 1843, as much as 3,196 upon each square mile. The increase in the whole Prussian monarchy since 1816 is 7,975,484, and presents a different picture to the increase of horses, which did not keep an equal ratio with the increase of the population. The population rose between the years 1816 and 1843 from 10,349,031 to 15,471,765, consequently, for every 100 inhabitants in 1816, there were, in 1843, 149·5. With regard to the number of sheep the relation is as 100 to 196·5, or for every 100 sheep in 1816 there were in 1843, 196·5.

The goat is not a favourite domestic animal in Prussia, we have

only 78 upon each square mile. In Spain there are 308, in Sardinia 231.

The proportion would be, that for each goat there are in Prussia,

Horses.	Cattle.	Sheep.	Hogs.
4 .....	13 .....	41 .....	5 to 6

M. Dieterici considers that of the total number the following proportions are used for consumption:—

Bulls .....	$\frac{1}{6}$
Oxen .....	$\frac{1}{7}$
Cows .....	$\frac{1}{8}$
Young Cattle .....	$\frac{1}{20}$
Sheep and Goats.....	$\frac{1}{6}$
Hogs .....	$\frac{1}{4}$

which furnishes the following data for the consumption of meat by each inhabitant:—

Beef .....	186,673,600 lbs	} which gives an average for each inhabitant per annum of .....	12·07 lbs.
Veal .....	77,611,160 „		5·02 „
Mutton....	83,151,690 „		5·37 „
Pork .....	174,504,990 „		11·28 „
Total.... 521,941,440 „			33·74 „

#### SECOND DIVISION.

The limits which I am obliged to draw, with regard to the extent of this paper, compel me to omit the details of the highly interesting Table of the second division, namely the Population Table of the Civil Subjects and the Military of the Prussian Monarchy. I shall select from it such matters as may prove most important.

The number of births in the Prussian monarchy (Neufchatel excepted,) amounted, in 1843, to 604,472, of which number 310,655 were boys, and 293,817 girls, there was therefore an excess of 16,838 boys over the girls, or for 100 girls there were nearly 106 (105·13) boys born.

It is remarkable that the same proportion has obtained since 1816, and similar facts have been observed in other European states.

The total number of births gives one child born for every 25·60 persons of the existing population. In England and Wales, this proportion amounts, according to Porter, to 1 to 35; in Austria, according to Becher, it is 1 to 27; in France, Belgium, and several other states, it varies between 1 to 28 and 1 to 32.

For every 10,000 children born in wedlock, there were 785 illegitimate, or 7·85 per cent. For every 100 girls born in wedlock there were 105·91 boys. For every 100 girls born out of wedlock there were 103·50 boys.

It is a very remarkable fact, that the proportion between boys and girls should differ so materially when born in wedlock or when illegitimate. We observe that the excess of boys over girls is much less when born out of wedlock than when the children are the offspring of married life. The cause has been frequently the subject of physical inquiry, and has been agitated since the time of Aristotle.

Whatever may be the moral state of Prussia, the proportion of



illegitimate children is, upon an average, not higher than in other European states.

In England the sixteenth child among births is illegitimate, in Belgium the fifteenth, in Sweden the fourteenth, in Prussia the thirteenth, in France the thirteenth, in Austria the ninth, in Bavaria the fourth.

If we enter into details we find, that in the district of Königsberg there are for 100 legitimate children 30·88 illegitimate, in Breslau 25·25, in Berlin 18·62, in Barmen 3·73.

In 1843 there were married 140,454 couple, consequently there was a marriage for every 110 persons of the population. Among 10,000 married in 1843 there were

9,379 men under 45 years of age,	7,931 females under 30 years of age,
518 between 45 and 60 years,	1,789 ditto between 30 and 45 years,
103 above 60 years,	280 ditto above 45 years.

The deaths amounted, in 1843, to 444,573, of this number there died from

Debility of old age .....	23,320	or	11·34	per cent.
Suicide .....	1,720	„	0·39	„
Sudden death .....	6,233	„	1·40	„
In child-bed .....	4,882	„	1·10	„
Small-pox .....	4,508	„	1·02	„
Hydrophobia.....	28	„	0·01	„
Inflammatory diseases* .....	104,047	„	23·40	„
Lingering diseases† .....	174,825	„	39·32	„
Apoplexy, Epilepsy, Convul- sions, Hæmorrhage .....	30,574	„	6·88	„
From exterior diseases and injuries‡ .....	7,553	„	1·69	„
Diseases of uncertain nature ....	36,491	„	8·21	„

The number of still-born children was, in 1843, 23,320, or 5·24 per cent. of the whole number of deaths.

The information deduced from the years 1841–1843, give the following data, in round numbers, as an annual result.

In the whole monarchy the deaths, in the course of a year at the several ages, are as follow:—

23,000	are still born
110,000	die before they reach their 1st year
55,000	die between their 2nd and 3rd year
19,000	„ 3rd „ 5th „
10,000	„ 5th „ 7th „
9,000	„ 7th „ 10th „
7,000	„ 10th „ 14th „
11,000	„ 14th „ 20th „

Carried over 244,000

\* Among inflammatory diseases are classed typhus, bronchitis, scarlatina, remittent fevers, measles, dropsy, constipation, inflammation of the lungs, diseases of the skin, dysentery.

† Lingering diseases, hooping cough, cholic, gout, dropsy, insanity, intermit- tent fevers, constipation, organic malformations.

‡ Exterior diseases and injuries, diseases of the kidney, cancer, strictures, mortification.

Brought forward 244,000

12,000	die between their 20th and 25th year
34,000	„ 25th „ 40th „
26,000	„ 40th „ 50th „
30,000	„ 50th „ 60th „
39,000	„ 60th „ 70th „
32,000	„ 70th „ 80th „
13,000	die above 80 years old.

---

430,000

The greatest number die in their first year of life, and the least between the 7th and 20th. In later life the period between the 60th and 70th is the most fatal. According to the season of the year the winter months, January, February, and March, are more fatal than any other period; and the summer months, July, August, and September the least.

The proportions in 1843 were as follows:—

In January, February, and March .....	131,217
„ April, May, and June .....	114,551
„ July, August, and September .....	95,310
„ October, November, and December .....	103,495

### THIRD DIVISION.

#### *The Medical Profession, Apothecaries, Midwives, Veterinary Surgeons, Hospitals, &c., in Prussia.*

The number of physicians in proportion to the population is not too high in Prussia. In 1840 there were for every 2,993 inhabitants (excluding the military) a physician. In 1843 the number had somewhat increased, namely, for every 2,877 persons there was a physician. The square mile contains on an average 3,045 inhabitants, hence there is not a physician for every square mile, if we take the number of inhabitants as our test. They are not equally divided. In the Government districts Gumbinnen, Marienwerder, &c., there is scarcely a physician for four or five square miles, or for six to 10,000 inhabitants. In the district of the city of Berlin, we have on the other hand 449 of the medical profession among a population of 333,990 inhabitants, or a physician for every 744 inhabitants. In Breslau the proportion is 1 to 666 persons. Table No. VII. enters into greater details, to which I refer. The general results prove that on an average there come annually—

To each physician .....	2,877 persons,
To each apothecary's shop .....	10,882 „
To each midwife .....	53 deliveries.

A similar comparison gives us as an average for the monarchy, that for every 1841 persons one individual is in an hospital. Towards the end of 1843 there were 8,292 sick persons in public institutions. Deducting the military, the other inhabitants amounted that year to 15,267,411 souls. The increase of hospitals between 1840 and 1843 amounted to 45. M. Dieterici, however, doubts the correctness of this return—he thinks the number is too high.

The following table exhibits the number of sick in the hospitals at the end of 1843, in the ten largest towns in Prussia:—



Name of the Town.	Number of Sick in the Hospitals towards the end of 1843.	Number of the Population, excluding the Military.	A Sick Person was in the Hospital out of the Population for every
Berlin.....	1,134	333,990	295
Breslau .....	498	97,939	197
Cologne and Dentz .....	710	81,608	115
Elberfeld and Barmen .....	99	67,940	686
Königsberg .....	195	67,376	346
Dantzic .....	379	58,583	155
Magdeburg, including the Suburbs ....	141	58,420	414
Aix-la-Chapelle .....	177	45,561	257
Stettin and Damm .....	94	40,174	427
Posen .....	245	35,713	146

## FOURTH DIVISION.

*Statistical Table of the State of Religion and Education in Prussia.*

The Prussian Monarchy does not possess a state religion. Christians of all denominations are regularly admissible to responsible situations in the Government. At the three-hundredth anniversary of the Reformation in 1817, the Calvinists and Lutherans united into one religious body, under the name of Evangelical Christians. They form the predominant religion. The number of inhabitants who conform to the Evangelical or Protestant religion, amount to 9,428,911, with 5,147 parish churches; consequently there is a parochial church for every 1,832 Protestant Christians. The number of Roman Catholics amounts to 5,820,123, and the parish churches to 3,899, or for 1,493 Roman Catholics there is a parish church. It appears that the Catholics have comparatively more parish churches than the Protestants. If, however, we include parochial chapels (Tochter Kirchen) the proportion is as follows:—

Protestant parochial churches and chapels 8,115, or a church for 1,162;

Roman Catholic parochial churches and chapels 5,182, or a church for 1,123; which is but a slight difference.

The number of churches, meeting-houses, and other religious buildings in Prussia dedicated to the Protestant faith, amounts to 8,976, or 1 for 1,050; and dedicated to the Roman Catholic faith 7,147 or 1 for 814.

The number of the ordained Protestant clergy is 5,839, or 1 clergyman for 1,615 parishioners; of the ordained Roman Catholic clergy 3,559, or 1 priest for 1,635 Catholics. But if catechists, religious teachers, and among the Catholics the inferior clergy, be included, the proportion of priests, &c., is in favour of the Catholics as 2 to 3.

The number of Jews in the Prussian Monarchy amounts to 206,529. They possess 863 synagogues; or for 1 synagogue there is the small number of 239 Jews.

*Education in Prussia.*

A sound and substantial education sheds its benefits to the latest years of man's life. Let the mind, when still fresh in years, be sup-

plied with that food which, whatever may be the situation of the youth hereafter, will be to him a store of useful knowledge, and tend to improve the powers of his understanding.

Various have been the means which have been resorted to by the Governments of civilized nations, to impart useful knowledge to the rising generation; in some instances, as in England, it has been left to individual exertions; in Germany, and on the Continent in general, it forms part of the paternal care of the sovereign to provide, not only the working classes with schools, where such knowledge as becomes the station of the scholar is imparted to their children, but it is rendered obligatory to the parents to send their children to school. On the other hand it has been proclaimed in England—"that for Governments to claim the right of prescribing or controlling the instruction of the people, is an intolerable usurpation."

The richer portion of the inhabitants of any country are well enabled to procure a suitable education for their children. It is different with the working classes, who are almost entirely dependent in England upon their own exertions, or upon such institutions as are provided by the benevolent contributions of private individuals. Such institutions form but a small number for the children of a population so large as England possesses, and hence the consequence is, that there is a deficiency of the common rudiments of education, which decidedly does not form a bright picture of voluntary education. From the returns of the Registrar-General it becomes evident, that after all the benevolent exertions made by private individuals and public institutions during the last forty years, nearly one-half of the adult population of England and Wales is composed of persons unable to write their own names. The returns of the year 1839, 1840, and 1841, state, that out of 735,788 persons married during that period, 303,386 signed the marriage-register with a mark only.

It would carry me from my object to enter here deeply into the system of education, as carried on in Prussia. It forms a branch of the administration. The candidates for school preferment generally receive admission into institutions which are founded for that purpose, and are subjected to strict examination before they are installed. The schools are regularly inspected, and it is rendered imperative upon the clergyman of the parish to visit them twice in the course of the week.

A particular clause in the common law of the country renders it obligatory to parents to send their children to school. The school-master is enjoined to keep a list of all such children as do not attend instructions, which list must be submitted to the clergyman, who reports it to the higher authorities.

With these passing remarks I shall now refer to the Education Table (No. XI.)

The schools have been divided into

### 1.—*Elementary Schools.*

These are similar to national schools, where all children may receive instruction in reading, writing, arithmetic, and the first principles of religion.



2. The schools of a higher class (*Mittelschulen*), where, in addition to the elementary instructions, the grammar of the maternal language, geography, and natural history are taught, which fit the pupil for the inferior class of a citizen's life. Similar instruction is imparted to the girls.

3.—*Grammar Schools, (Höhere Bürgerschulen).*

In these schools such instruction is imparted as will qualify the pupil for commercial life, or as a mechanic of the higher class. Besides the elementary instruction they are taught Latin, mathematics, physics, and foreign languages.

4.—*The Preparatory Schools to the Pro-Gymnasium.*

In Catholic provinces these were formerly convent, or Latin schools, where the pupils were prepared for a clerical life. Sometimes they entered the priesthood direct from these schools, but more frequently they were transferred to a gymnasium or college school.

5.—*Collegiate School, or Gymnasium.*

This is an institution from which the pupil enters the university. It frequently possesses privileges similar to those of universities or colleges.

According to the common law of the country\* the parents are enjoined to send their children to school after they have reached the fifth year, and to continue schooling until the clergyman considers the pupil sufficiently advanced for the state of life to which he is dedicated. It is, therefore, assumed that children between the sixth and fourteenth year to the entrance of the fifteenth, ought to visit the schools.

The number of children in the Prussian monarchy, between the sixth and the end of the fourteenth year, amounted in 1843 to 2,992,124.

The number of scholars in elementary schools was...	2,328,146
In higher schools there were scholars .....	120,888

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2,449,034

if we deduct that number, there remain apparently 543,090 children who do not attend school. As in the higher schools children remain above their fourteenth year, that number may probably amount to 570,702; but M. Dieterici observes, it must not be considered that this number of children do not attend schools at all. He thinks that some receive private instruction, which chiefly refers to girls, and the discrepancy is still more removed by the circumstance, that among the poorer classes a great many children enter domestic service even at their twelfth year, the girls to attend as housemaids, the boys to assist in the fields. Abstractedly from this discrepancy, the number of children fit for school (*i. e.* between their sixth and fifteenth year), amount to 2,992,124, or 19·3 per cent. of the whole population.

The elementary schools were attended by 2,328,146, or 15·05 per cent., but taking the whole number who received instructions in the different institutions we have 2,421,422 scholars, or 15·7 per cent. of

\* "Allgemeines Landrecht," Th. 2, Tit. 12, Parage 43 und 46.

the whole population. Mr. Porter observes, in his tables of revenue, that in 1837, in Scotland, with a population of 2,523,418 inhabitants, 190,239 children went to school, or about 7·539 per cent. of the whole population. Villemain states in the "Tableau de l'Etat actuel de l'Instruction Primaire de 1841," that in 1840 the number of scholars in the primary schools amounted to 2,881,679, or about 8·472 per cent. of the whole population of France.

Some of the Government districts in Prussia distinguish themselves for the regularity with which the schools are visited. Thus the number of children between six and fourteen years inclusive, amounts in the district Merseburg (Province of Saxony) to 19·98 per cent. of its population; of this 131,327, or 18·73 per cent. receive instruction. If we compare the number of elementary schools and teachers with the number of scholars who receive instruction, we observe that for each school there are 99 scholars, and each teacher has to instruct 78 scholars. With regard to the schools of the second class, for boys, there come to each school 114 boys, and for every 37 boys one teacher; for girls, to each school 126 girls, and for every 26 girls a teacher. For every grammar-school there are 148 scholars and one teacher for every 22 scholars. In the Catholic preparatory schools (Pro-Gymnasium) the proportion for each institute is 62 scholars, and for every 12 scholars one teacher. The number of college schools (Gymnasia) is 117, the number of scholars 25,013; consequently there are 216 scholars for each, and 17 scholars for each teacher.

The seminaries for training pupils for teachers amount to 41, or there are about 62 pupils in each. The number who are under training amounts to 2,546. It is considered that annually 838 places of schoolmasters become vacant, which these institutes can well and efficiently supply. They are subjected to rigid examination before a place is conferred upon them.

#### FIFTH DIVISION.

##### *Persons engaged in Trade and Commerce, Manufactories, &c.*

In the introductory remarks I have already observed that Prussia is an agricultural State, and agriculture forms the chief source of the national wealth. The principal manufactures are woollen cloths, linen, cotton goods, silk, leather, iron, &c. The Table No. XII. does not exhibit all the manufactories which Prussia possesses, and which, according to a separate table, Dieterici announces to amount to 746, occupying 4,989 boys and 2,360 girls under fourteen years, and 43,482 males and 13,414 females above fourteen years, or altogether 64,245 individuals. Prussia possesses further 9,588 breweries, and 10,131 distilleries, which, including the masters, employ 118,314 persons.

The product of mines of all descriptions is calculated at 32,839,703 Prussian dollars. The miners and workmen employed, amount to 80,192, and form, with their families, a body of 262,443 individuals.

The number of spindles in Prussia bear no comparison with that in Great Britain, where, for the preparation of twist alone, more than 11,000,000 of fine spindles are employed.

Steam is comparatively but little employed; the whole number of engines, for various purposes, amounted in 1843 to 1,091, comprising



27,242 horse-power. In 1840 there were only 634, of 12,278 horse-power, consequently there has been on the average an annual increase of 152 new engines, comprising 4,988 horse-power.

The number of commission-merchants and such as are only engaged in wholesale trade, amounts for the whole monarchy to 16,700, or almost 0·108 of the whole population; that is, among 100,000 inhabitants, 108 are engaged in that branch of commerce.

Persons following the retail business constitute 0·178 of the population, and such as do not possess the privilege of commercial corporations to 0·679; they surpass, consequently, the former by nearly four times.

The carrying trade is calculated at 813,748 lasts, conveyed by river boats, barges, &c., and at 18,163 horses, conveying goods on land. The whole amount of freightage has been calculated by Dieterici:—

By boats and barges .....	11,409,018 cwt.
And 18,163 horses conveying each 10 cwt.....	181,630 „
Total.....	11,590,648 „

The column of “Domestics and Servants” gives a sum total of 1,240,194, or 8·016 per cent. of the whole population.

In conclusion, I refer to the result of the national industry in Prussia, as exhibited in Table XII.

		Per cent. of the whole Population.
Tradesmen, including Clothworkers, Dyers, Calico-Printers, } Optical Instrument-Makers .....	2,040,566	= 13·19
Manufactories, according to Table XII., occupying .....	87,543	= 0·57
Manufactories not specified in Table XII., occupying .....	243,681	= 1·58
Breweries and Distilleries .....	179,443	= 1·16
Mines employ .....	262,443	= 1·69
Mills of all descriptions employ .....	237,177	= 1·53
Spinning Machines employ .....	58,356	= 0·38
Looms employ .....	505,161	= 3·27
	3,614,370	23·37

TABLE I.  
*Area in Square Miles of the Prussian Monarchy.*

Provinces.	Square miles.
Prussia Proper .....	1,178·03
Posen .....	536·51
Brandenburg .....	734·14
Pomerania .....	574·33
Silesia .....	741·74
Saxony .....	460·63
Westphalia .....	367·96
Rhenish Provinces .....	487·14
Total (excluding Neufchatel) ....	5,080·48

NOTE.—A Prussian geographical square mile is equal to about twenty-one English geographical square miles.

TABLE II.  
*Population of Prussia in 1843.*

Among 100,000 Inhabitants taken in general there were	Children under 14 years of Age.									
	Children under 6 Years of Age.		From the 6th to the end of the 7th Year.		From the 8th to the end of the 14th Year.		Children in general who have not reached the 14th Year as yet.		Persons from the commencement of the 15th to the end of the 16th Year.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Males.	Females
	1,184,300	1,162,966	378,541	373,252	1,135,718	1,104,613	2,698,559	2,640,831	332,783	319,180
	7,655	7,517	2,447	2,412	7,341	7,140	17,443	17,069	2,151	2,063

Among 100,000 Inhabitants taken in general there were	Persons of the Male Sex above 16 years of Age.								
	From the 17th to the 20th Year, inclusive.	From the 21st to the 25th Year, inclusive.	From the 26th to the 32nd Year, inclusive.	From the 33rd to the 39th Year, inclusive..	From the 40th to the 45th Year, inclusive.	From the 46th to the 60th Year, inclusive.	Above 60 Years	Total number of Persons of the Male Sex above 16 Years.	
	594,251	743,642	836,076	663,332	555,160	837,808	459,427	4,689,696	
	3,841	4,806	5,404	4,287	3,588	5,415	2,969	30,310	

Among 100,000 Inhabitants taken in general there were	Females above 16 years of Age.				Total number of the Population.		
	From the 17th to the 45th Year, inclusive.	From the 46th to the 60th Year, inclusive.	Above 60 Years.	Total number of Females above 16 Years of age.	Males.	Females.	Grand Total.
	3,406,300	896,872	487,544	4,790,716	7,721,038	7,750,727	15,471,765
	22,016	5,797	3,151	30,964	49,904	50,096	100,000



TABLE II.—*continued.*  
*Population of Prussia in 1843.*

	Number living in a state of Matrimony.		According to their Religious Faith there are						
	Males.	Females.	Protestants.	Roman Catholics.	Of the Greek Church.	Menonites.	Jews.		Mahomedans.
							Enjoying the Rights of Citizens.	Without enjoying the Rights of Citizens.	
	2,562,693	2,570,390	9,428,911	5,820,123	1,879	14,313	127,893	78,636	10
Among 100,000 Inhabitants taken in general there were .....	16,546	16,613	60,943	37,618	12	92	827	508	

## Deaf and Dumb.

Among 100,000 Inhabitants taken in general there were .....	Children under 5 Years of Age.		Between the 5th and 15th Years.		After the 15th Year and before the end of the 30th Year.		Above the 30th Year.		Total Number of Deaf and Dumb Persons.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
	186	144	1,601	1,138	2,575	2,034	2,098	1,721	
	1	1	10	7	17	13	14	11	74

## Blind Persons.

	Children from the earliest Age to the end of the 15th Year.		After the 15th Year and before the end of the 30th Year.		Above the 30th Year.		Total number of Blind Persons.
	Males.	Females.	Males.	Females.	Males.	Females.	
Among 100,000 Inha- bitants taken in gene- ral there were .....	435	371	719	726	4,068	3,833	10,152
	3	2	5	5	26	25	66

TABLE III.

*Number of Horses, Cattle, Sheep, &c., in the Prussian Monarchy in 1843.*

HORSES.				Mules.	Donkeys.
Foals to the 3rd year.	From the 4th to the end of 10th year.	Above 10 years.	Total number of Horses.		
302,074	747,667	514,813	1,564,554	353	6,924

CATTLE.				
Bulls.	Oxen.	Cows.	Young Cattle.	Total number of Cattle.
70,645	736,157	2,874,486	1,360,722	5,042,010

SHEEP.				Goats.	Hogs.
Merino, or improved Breed of first quality.	Second quality.	Common Sheep.	Total number of Sheep.		
4,202,024	7,794,421	4,239,435	16,235,880	394,459	2,115,212

TABLE IV.

*Number of Inhabitants on each Square Mile.*

Provinces.	Area in square miles.	Number of souls inhabiting an area of a square mile in extent.	Number inhabiting an extent of an English square mile.	The population on each square mile increased from 1825 to 1843 from 100 to
Prussia .....	1178·03	2,043	97	126
Posen.....	536·51	2,405	115	124
Brandenburg.....	734·14	2,636	126	132
Pomerania.....	574·33	1,926	92	131
Silesia .....	741·74	3,976	189	128
Saxony .....	460·63	3,656	174	124
Westphalia.....	367·96	3,863	184	120
Rhine.....	487·14	5,500	262	124



TABLE V.

*Comparative Statement of Ages and Sexes among the Prussian Population.*

Ages.	Males.	Females.	Excess.		Among 100,000 Inhabitants there were		For every 100 Males there are Females
			Males.	Females.	Males.	Females.	
0 to 5 yrs.	1,184,300	1,162,966	21,334	....	7,655	7,517	98·197
6 — 7 „	378,541	373,252	5,289	....	2,447	2,412	98·570
8 — 14 „	1,135,718	1,104,613	31,105	....	7,331	7,140	97·262
0 to 14 yrs.	2,698,559	2,640,831	57,728	....	17,443	17,069	97·856
14 — 16 „	332,783	319,180	13,603	....	2,151	2,063	95·909
0 to 16 yrs.	3,031,342	2,960,011	71,331	....	19,594	19,132	97·642
17 — 45 „	3,392,461	3,406,300	....	13,839	21,926	22,016	100·410
46 — 60 „	837,808	896,872	....	59,064	5,415	5,797	107·054
Above 60	459,427	487,544	....	28,117	2,969	3,151	106·103
General result	7,721,038	7,750,727	71,331	101,020	49,904	50,096	100·385
Excess of Females above Males....				29,689	100,000		

TABLE VI.

*Public Edifices and Private Dwellings in Prussia in 1843.*

<i>A.—Public Edifices.</i>	
Churches, Chapels, Meetinghouses, and other Buildings for Religious Worship .....	16,668
Schools for Public Instruction .....	22,57
Buildings dedicated to the reception and maintenance of Orphans of the Sick, Aged, and Destitute .....	4,982
Buildings appropriated to Government Offices, to the Administration of Justice, the Police Department, Customs and Excise, Magistrates, and Corporations .....	2,764
Buildings for other purposes connected with Clerical and Civil Authorities, Institutions, &c. ....	26,763
Buildings for Military Purposes, including Commissariat Buildings, Military Hospitals, &c.....	2,379
Total .....	76,133
<i>B.—Private Dwellings.</i>	
Private Dwelling-houses.....	1,874,472
Manufactories, Magazines, &c. ....	110,161
Stables, Barns, Sheds .....	2,028,107
Total .....	4,012,740

TABLE VII.

*Number of Persons of the Medical Profession, Surgeons, Midwives, &c., and the number of Hospitals for the reception of the Sick in Prussia.*

Year.	Number of								Public Hospitals.		
	Medical Men authorized to practise among Civilians.	Military Medical men authorized to practice among Civilians.	Surgeons of the first class.	Surgeons of the second class.	Surgeon-dentists, &c.	Apothecary Shops.	Midwives who have passed examination.	Veterinary Surgeons.	Number.	Number of Sick present at the commencement of the year 1843.	Number of Sick present at the end of the year 1843.
1843	2,847	323	724	1,292	120	1,403	11,260	749	336	8,436	8,292
1840	2,511	313	586	1,394	116	1,386	11,266	613	291	7,628	7,789

TABLE VIII.

*Exhibiting the State of Religious Affairs in Prussia in 1843.*

The Protestant Religion, including the Moravians.					Roman Catholic Religion.							
Parish Churches.		Parochial Churches.			Meeting-houses and other buildings for religious worship, without possessing parochial rights.	Number of the Ordained Clergy.	Catechists, Lecturers, and other Teachers of Religion who have not been ordained.	Parish Churches.		Meeting-houses and other buildings for religious worship, without possessing parochial rights.	Number of Priests.	Chaplains, Vicars, &c.'
	Chapels.											
5,147	2,968	861	5,839	120	3,899	1,283	1,965	3,559	2,018	3	29	863
					Meeting-houses of persons belonging to the Greek Church.							
					Meeting-houses of the Mennonites.							
					Synagogues and other religious buildings of the Jews.							



TABLE IX.

*National Education in Prussia in 1843.*

SCHOOLS.									
Elementary Schools.									
Number of Schools.	Teachers.			Number of Scholars who generally attend the School.					
	Permanently employed Teachers.	Assistant Teachers.	Female Teachers.	Boys.	Girls.				
23,646	25,150	2,680	1,801	1,184,864	1,143,282				
Schools of a higher class than the former, for Boys.				Schools of a higher class for Girls.					
Number of Schools.	Number of perma- nently employed Teachers.	Assistant Teachers.	Number of Scholars.	Num- ber of schools	Number of perma- nently employed Teachers.	Number of perma- nently employed Female Teachers.	Number of Assistant Teachers.	Number of Assistant Female Teachers.	Number of scholars.
336	809	231	38,191	325	526	371	428	228	40,910
Grammar Schools.				Preparatory Schools pro Gymnasium.					
Num- ber.	Number of permanently employed Teachers.	Number of Assistant Teachers.	Number of Scholars.	Num- ber.	Number of permanently employed Teachers.	Number of Assistant Teachers.	Number of Scholars.		
100	485	184	14,795	32	121	51	1,979		
Colleges.		Schools Gymnasium.			Seminaries for training Teachers.				
Number.	Number of permanently employed Teachers	Number of Assistant Teachers.	Number of Scholars.	Number of Seminaries.	Number of Pupils.				
117	1,077	399	25,013	41	2,546				

TABLE X.

Statement of the Average Number of Students during Six Terms successively from 1820 to 1840, in the Universities of Prussia, and a separate Statement during the Years 1841 to 1844 for each Term.

During the Six Terms specified below studied on an Average.	Theology.				Jurisprudence.		Medicine.		Philosophy.		Number of Students in the different Sciences.		Grand Total.	Or one Student for the following Number of Inhabitants.
	Protestants.		Roman Catholics.		Prussian Subjects.	Foreigners.	Prussian Subjects.	Foreigners.	Prussian Subjects.	Foreigners.	Prussian Subjects.	Foreigners.		
	Prussian Subjects.	Foreigners.	Prussian Subjects.	Foreigners.										
Terms.														
From 1820 to 1822 ..	845	144	206	97	902	162	416	224	449	119	2,818	746	3,564	4,018
" 1823 " 1825 ..	1,146	297	477	126	1,255	145	468	204	530	122	3,876	894	4,770	3,086
" 1826 " 1828 ..	1,521	412	708	156	1,419	153	473	205	604	147	4,725	1,073	5,798	2,644
" 1829 " 1831 ..	1,725	384	666	129	1,308	214	500	191	638	153	4,837	1,071	5,908	2,663
" 1832 " 1834 ..	1,426	249	582	56	1,160	193	635	199	659	139	4,462	836	5,298	2,975
" 1835 " 1837 ..	1,080	207	428	39	863	168	704	197	713	165	3,788	776	4,564	3,644
" 1838 " 1840 ..	959	205	399	27	836	179	719	194	727	186	3,640	791	4,431	3,987
During the Term of—														
Summer in 1841 . . . .	879	225	386	20	799	166	701	170	735	181	3,500	762	4,262	..
Winter in 1841-1842 ..	864	255	403	28	813	229	674	164	816	210	3,570	886	4,456	..
Summer, 1842- . . . . .	856	235	412	28	779	208	687	151	826	190	3,560	812	4,372	..
Winter, 1842-1843. . .	855	244	413	25	783	226	645	173	831	234	3,527	902	4,429	..
Summer, 1843- . . . . .	811	222	406	20	783	194	653	157	790	227	3,442	820	4,262	..
Winter, 1843-1844. . .	775	241	455	30	879	204	636	164	807	246	3,552	385	4,437	..
Sum during Six Terms	5,040	1,422	2,474	151	4,836	1,227	3,996	979	4,805	1,288	21,151	5,067	26,218	..
Or on the Average } during each Term. . . }	840	237	412	25	806	204	666	163	801	215	3,525	844	4,369	4,312



TABLE XI.

*Number of Students in the Universities of Prussia during the Winter Term from 1843 to 1844.*

Winter Term, from 1843 to 1844.  Universities.	Theology.				Jurisprudence.		Medicine.		Philosophy.		Number of Students.		Grand Total.
	Protestants.		Roman-Catholics.		Prussian Subjects.	Foreigners.	Prussian Subjects.	Foreigners.	Prussian Subjects.	Foreigners.	Prussian Subjects.	Foreigners.	
	Prussian Subjects	Foreigners.	Prussian Subjects	Foreigners.									
Berlin .....	249	94	...	...	394	156	220	100	286	157	1,149	507	1,656
Breslau .....	94	...	204	1	128	...	112	3	163	2	701	6	707
Bonn .....	18	52	117	5	170	42	91	16	89	52	485	167	652
Halle....	301	90	...	...	91	4	68	37	43	11	503	142	645
Königsberg .....	73	3	...	...	70	1	72	4	110	8	325	16	341
Munster .....	...	...	134	24	...	...	...	...	67	1	201	25	226
Greisswalde .....	40	2	...	...	26	1	73	4	49	15	188	22	210
Total .....	775	241	455	30	879	204	636	164	807	246	3,552	885	4,437

TABLE XII.—(A.)

*Comparative Statement of the National Industry, the State of Trade, Commerce, and Manufactories in Prussia, during the Years 1840 and 1843.*

Trade or Branch of Occupation.	1843.		1840.		The year 1843 compared with 1840, shows				For every 100 Masters and Assistants in 1840 there were in 1843
	Masters or Persons working on their own Account	Journey-men & Apprentices.	Masters or Persons working on their own Account	Journey-men & Apprentices.	An Increase of		A Decrease of		
					Masters, &c.	Journeymen and Apprentices.	Masters, &c.	Journeymen and Apprentices.	
<b>I. Mechanics and Tradesmen.</b>									
Bakers .....	24,257	12,385	23,458	11,460	799	925	..	..	104·937
Biscuit & Gingerbread } Bakers, Confectioners }	1,957	..	1,739	..	218	..	..	..	112·536
Butchers .....	18,399	8,173	17,754	7,796	645	377	..	..	104·000
Soap and Candle Manu- } facturers..... }	1,633	..	1,695	..	..	..	62	..	96·342
Tanners of all descrip- tions, Leather-dressers }	5,639	5,474	5,614	5,310	25	164	..	..	101·813
Shoe and Bootmakers ...	81,126	45,455	77,380	42,826	3,746	2,629	..	..	105·303
Glovers, Pursemakers, &c.	1,502	1,116	1,498	1,153	4	..	..	37	98·755
Furriers, Skinners, &c...	3,446	2,664	3,121	2,321	325	343	..	..	112·272
Saddlers, Girdlers, &c. ..	8,112	5,371	7,681	4,756	431	615	..	..	108·410
Ropemakers.....	3,841	2,461	3,684	2,532	157	..	..	71	101·384
Tailors .....	65,946	36,411	62,254	32,357	3,692	4,054	..	..	108·187
Lace and Cordmakers....	1,173	..	1,119	..	54	..	..	..	104·826
Milliners, Habitmakers, } (Males and Females) }	3,608	..	3,080	..	528	..	..	..	117·143
Hat and Feltmakers ....	1,654	907	1,792	946	..	..	138	39	93·535
Carpenters, including } Ships' Carpenters.... }	7,204	33,407	7,085	30,481	119	2,926	..	..	107·673
Persons licensed to re- pair Carpenters' work } (Jobbers) .....	3,017	..	2,953		64				
Joiners, Cabinetmakers..	36,656	28,722	34,128	24,877	2,528	3,845	..	..	110·800
Cartwrights .....	16,497	6,856	15,772	6,009	725	847	..	..	107·218
Coopers .....	14,169	6,390	13,779	6,121	390	269	..	..	103·212
Turners .....	6,636	..	6,261	..	375	..	..	..	105·990
Combmakers.....	1,087	..	1,014	..	73	..	..	..	107·199
Brushmakers .....	755	..	687	..	68	..	..	..	109·898
Basketmakers .....	4,166	..	3,873	..	293	..	..	..	107·565
Masons .....	5,790	43,380	5,812	37,011	..	6,369	22	..	113·944
Persons licensed for re- pairing Masons' work } (Jobbers) .....	3,970	..	3,814	..	156	..	..	..	
Bricklayers and Slaters..	2,419	..	2,173	..	246	..	..	..	111·367
Stone Masons & Stone } Cutters .....	1,387	2,530	1,167	2,494	220	36	..	..	106·993
Potters and Manufactu- rers of Ovens..... }	5,104	5,459	5,009	5,126	95	333	..	..	104·223
Glaziers.....	5,263	..	4,998	..	265	..	..	..	105·302
House Painters, Gilders..	3,965	..	3,474	..	491	..	..	..	114·134
Smiths, Armourers, &c...	35,382	20,537	33,856	18,790	1,526	1,747	..	..	106·217
Locksmiths, Gunsmiths, } Manufacturers of } Tools, as saws, gim- } lets, &c., Cutlers .... }	20,769	19,788	19,234	17,751	1,535	2,037	..	..	109·658
Manufacturers of Swords	852	2,184	859	2,059	..	89	7	..	102·810
Coppersmiths .....	1,385	1,706	1,366	1,520	19	186	..	..	107·103
Braziers, Bellfounders, &c.	498	849	492	810	6	39	..	..	103·456
Pewterers .....	514	411	512	403	2	8	..	..	101·093
Tinkers, Manufacturers } of Tinware..... }	2,516	2,576	2,193	2,175	323	401	..	..	116·574
Optical and Mathe- matical Instrument- } Makers .....	549	1,031	488	898	61	133	..	..	113·997
Gold and Silversmiths ..	1,632	1,684	1,593	1,514	39	170	..	..	106·727
Watchmakers, Watch- case-makers, &c..... }	2,489	1,147	2,328	1,012	161	135	..	..	108·862
Lapidaries, Seal En- gravers, &c..... }	246	..	238	..	8	..	..	..	103·361
Clothworkers, Cloth- shearers .....	1,256	2,888	1,321	2,851	..	37	65	..	99·329
Dyers .....	3,741	4,562	3,519	4,293	222	269	..	..	106·285
Bookbinders.....	2,872	2,481	2,587	2,193	285	288	..	..	111·987



TABLE XII. (B).—Comparative Statement of the National Industry, &amp;c., continued.

Name of the Manufactory and Branch of Occupation.	1843.		1840.		The year 1843 compared with 1840 shews				For every 100 Masters in 1840, there were in 1843.
	Number of manufactories and institutes.	Number of people employed.	Number of manufactories and institutes.	Number of people employed.	An increase of		A decrease of		
					Manu- factories or in- stitutes.	Number of people em- ployed.	Manu- factories or in- stitutes	Number of people em- ployed.	
2.—Manufactories and the number of Workpeople employed therein.									
Manufactories for Printing Calicoes and other Stuffs	1,051	4,826	1,115	5,656	..	..	64	830	{ 94,260 85,378
Manufactories of Paper Hanging, Wax and Oil Cloth	105	757	86	687	19	70	..	..	{ 122,093 110,190
Type Foundries	22	170	25	131	..	39	3	..	{ 88,000 129,771
Printing Offices (including Music Printing)	514	1,202	447	1,109	67	93	..	..	{ 114,999 108,386
Offices for Printing Copper Plates and Woodcuts	60	..	46	..	14	..	..	..	{ 130,435
Offices for Printing Lithography	377	..	320	..	57	..	..	..	{ 117,812
Iron Works, Foundries	1,178	..	1,156	..	22	..	..	..	{ 101,090
Copper Works	73	..	80	..	..	..	7	..	{ 91,250
Smelting Houses and other Foundries worked by water	641	..	628	..	13	..	..	..	{ 102,070
Manufactories of Chemical substances	229	1,702	218	1,480	11	222	..	..	{ 105,046 115,000
Sugar Refineries	60	2,406	73	1,943	..	463	13	..	{ 82,192 123,829
Beet Sugar Manufactories	79	..	97	..	..	..	18	..	{ 81,443
Manufactories of Starch	243	..	198	..	45	..	..	..	{ 122,722
Manufactories of Pot Ash and Wood Ash	573	..	777	..	..	..	204	..	{ 73,746
Manufactories of Glass	114	2,874	113	2,433	1	441	..	..	{ 100,885 118,126
Manufactories of Ware, China, &c.	68	3,027	78	2,557	..	470	10	..	{ 87,308 118,381
Limekilns	2,197	..	1,905	..	292	..	..	..	{ 115,328
Manufactories of Bricks	5,165	..	4,512	..	653	..	..	..	{ 114,470
Manufactories of Tar and Pitch	723	..	732	..	..	..	9	..	{ 98,770
3.—Spinning Machines.									
	Number of manu- factories	Number of spindles.	Number of manu- factories	Number of spindles.	Number of manu- factories	Number of spindles.	Number of manu- factories	Number of spindles.	
For Cotton	136	150,436	158	150,437	..	..	22	1	{ 86,076 100,000
„ Wool (a) Streich Garn (German)	3,300	405,603	3,561	330,839	..	24,764	261	..	{ 92,390 106,502
(b) Kamm Garn, ditto	649	47,061	759	56,258	..	..	110	9,197	{ 85,507 83,652
„ Flax	17	27,819	8	15,844	9	11,975	..	..	{ 212,500 175,581
4.—Looms in Operation.									
	Number of looms		Number of looms		Number of looms		Number of looms.		
For Silks and Silks (half)	16,911	..	15,715	..	1,196	..	..	..	{ 107,605
„ Cotton and half cotton	47,747	..	48,540	..	..	..	793	..	{ 98,366
„ Wool and half wool	17,911	..	17,846	..	65	..	..	..	{ 100,364
„ Linen	34,451	..	37,971	..	..	..	3,520	..	{ 90,730
„ the Manufacture of Stockings	2,272	..	2,398	..	..	..	126	..	{ 94,746
„ Ditto Ribbons	3,918	..	4,212	..	..	..	294	..	{ 102,874
„ Linen Cloth	276,071	..	254,441	..	21,630	..	..	..	{ 108,501
„ Coarse Woollen Stuff	5,912	..	6,072	..	..	..	160	..	{ 97,365
Looms of different descriptions not specified	9,437	..	5,558	..	3,879	..	..	..	{ 169,611
5.—Mills.									
	Number of mills.	Number of sets in the mills	Number of mills.	Number of sets in the mills	Mills.	Sets in the mills	Mills.	Sets in the mills	
A. For converting Grain into Flour, manufacturing Peeled Barley, Groats, and Malt.									
(1). By watermills	14,220	24,250	14,139	23,959	81	291	..	..	{ 100,573 101,215
(2). By windmills, according to German construction	10,572	..	10,262	..	310	..	..	..	{ 103,021
Ditto, according to Dutch ditto	874	..	771	..	103	..	..	..	{ 113,359 112,657
(3). Worked by animal power	1,522	1,610	1,351	1,424	171	186	..	..	{ 113,062 202,941
(4). Worked by steam	69	196	34	93	35	103	..	..	{ 210,745 102,874
B. Oil Mills	4,618	..	4,489	..	129	..	..	..	{ 99,558
C. Fulling Mills	900	..	904	..	..	..	4	..	{ 104,155
D. Tan Mills	1,153	..	1,107	..	46	..	..	..	{ 102,895
E. Saw Mills (1) with one saw	2,381	..	2,314	..	67	..	..	..	{ 118,018
(2) with several saws	131	..	111	..	20	..	..	..	{ 115,385
(3) with circular saws	15	..	13	..	2	..	..	..	
F. Paper Mills									
(1). According to general construction	412	..	449	..	..	..	37	..	{ 91,760
(2). For Preparing Endless Paper	43	..	26	..	17	..	..	..	{ 165,386

TABLE XII.—(C.)  
Comparative Statement of the National Industry—(continued.)

Branch of Occupation.	1843.	1840.	The year 1843 compared with 1840 shews		For every 100 in 1840 there were in 1843
			an In-crease of	a De-crease of	
6.—Persons engaged in Commerce.					
Bankers .....	424	408	16	....	103·922
Commission & wholesale merchants	4,185	3,937	248	....	106·298
Retailers who keep Shops.					
Grocers .....	13,035	12,000	1,035	....	108·625
Retailers of dry goods, drapers ...	7,308	6,616	692	....	110·495
Retailers of cutlery, hardware, &c	1,514	1,372	142	....	110·350
Retailers of fancy goods, jewellery, } &c. ....	931	826	105	....	112·712
Ditto of goods not previously spe- cified .....	4,790	3,924	866	....	122·069
Wine merchants .....	1,184	1,167	17	....	101·457
Corn merchants .....	5,199	4,319	880	....	120·375
Timber merchants .....	5,276	4,398	878	....	119·964
Brokers, including shipbrokers .....	432	312	120	....	138·461
Book, print, and music-sellers .....	630	523	107	....	120·459
Sellers of curiosities, second-hand } books, &c. ....	93	103	....	10	90·291
Circulating libraries .....	543	520	23	....	104·423
Retailers who do not possess commercial privileges.					
Retailers of toys, pins, and fancy } goods .....	28,437	26,114	2,323	....	112·725
Retailers of provisions, hucksters, &c.	58,551	54,156	4,395	....	108·115
Pedlers .....	18,146	16,237	1,909	....	102·504
7.—Watercarriage.					
Vessels appropriated for carrying } freight .....	12,186	10,319	1,867	....	118·093
These carry lasts.....	313,748	255,881	57,867	....	122·612
Landcarriage.					
Carriers and waggoners who transact } business on their own account ....	7,497	7,182	315	....	104·386
Horses employed for this purpose...	18,163	17,033	1,130	....	106·634
8.—Hotels, Taverns, &c.					
Hotels.....	4,341	4,050	291	....	107·185
Inns and taverns .....	20,677	20,136	541	....	102·687
Coffee and eating-houses .....	2,182	2,111	71	....	103·363
Ale and beer-houses, gin-shops, &c.	53,706	54,719	....	1,013	98·149
Street musicians, or such as play in } taverns .....	9,698	8,938	760	....	108·503
9.—Servants—Domestics.					
(a) Domestics, as butlers, livery- servants, coachmen, grooms, gar- deners, cooks, &c.—Males .....	31,484	29,570	1,914	....	106·473
Ladiesmaids, chambermaids, house- maids, nurses, cooks, &c.—Females	118,263	....	11,825	....	111·110
(b) Servants for assisting in agri- cultural pursuits—Males .....	533,803	515,425	18,378	....	103·566
Females .....	556,644	542,269	14,375	....	102·651



TABLE of Births, Marriages, and Deaths, in the different Government Districts in Prussia in the year 1843.

Name of the Government District.	Births.				Marriages	Still-born Children.				Deaths (including the Still- born Children.)				
	In General.		Of which Number were Illegitimate.			Total.	Males.	Females.	Total.					
	Boys.	Girls.	Total.	Legitimate.						Illegitimate.				
				Boys.						Girls.	Boys.	Girls.		
Königsberg .....	17,645	16,695	34,340	1,632	3,272	8,680	600	436	76	69	1,181	11,744	11,009	22,753
Gumbinnen .....	13,812	12,968	26,780	1,122	2,350	6,539	353	265	41	27	686	9,043	8,557	17,600
Dantzic .....	8,590	8,180	16,770	772	1,563	4,033	297	215	61	45	618	5,870	5,328	11,198
Marienwerder .....	14,321	13,589	27,910	847	1,695	6,880	388	268	32	32	720	9,571	8,745	18,316
Posen .....	18,868	17,685	36,553	1,022	2,114	8,554	592	401	69	43	1,105	15,005	13,966	28,971
Bromberg .....	10,570	10,202	20,772	597	1,175	4,939	287	245	21	32	585	7,553	6,801	14,354
City of Berlin .....	6,019	5,615	11,634	890	1,826	3,159	234	163	66	59	522	4,979	3,905	8,884
Potsdam .....	15,214	14,629	29,843	1,087	2,232	7,002	702	488	69	63	1,322	10,557	9,500	20,057
Frankfurt .....	15,283	14,674	29,957	1,299	2,628	7,204	700	495	88	62	1,345	10,626	9,664	20,290
Stettin .....	10,873	10,311	21,184	838	1,690	4,832	360	276	42	46	724	6,282	5,958	12,240
Köslin .....	8,711	8,090	16,801	599	1,233	3,877	326	227	27	26	606	4,653	4,253	8,906
Stralsund .....	3,297	2,989	6,286	327	674	1,556	127	92	15	9	243	2,042	1,900	3,942
Breslau .....	22,245	20,851	43,096	2,298	4,649	9,649	923	686	129	105	1,843	20,674	20,076	40,750
Oppeln .....	20,904	19,872	40,776	1,371	2,606	8,983	663	424	78	58	1,223	17,280	16,145	33,425
Liegnitz .....	16,092	15,470	31,562	1,667	3,353	7,723	909	636	135	116	1,796	14,838	14,355	29,193
Magdeburg .....	12,203	11,676	23,879	995	1,993	5,907	572	423	60	54	1,109	9,112	8,874	17,986
Merseburg .....	12,951	12,186	25,137	1,190	2,509	5,732	516	355	67	77	1,015	9,853	9,373	19,226
Erfurt .....	6,000	5,842	11,842	408	852	2,529	198	180	21	25	424	4,738	4,578	9,316
Münster .....	6,598	6,156	12,754	172	362	3,111	167	128	3	5	303	5,037	5,083	10,120
Minden .....	9,182	8,612	17,794	408	842	3,909	366	250	27	16	659	6,804	6,936	13,740
Arnsberg .....	10,718	10,025	20,743	444	877	4,482	374	273	10	17	674	6,663	6,401	13,064
Cologne .....	9,310	8,691	18,001	422	860	3,814	524	378	47	26	975	6,415	6,269	12,684
Dusseldorf .....	16,756	15,559	32,315	599	1,158	7,014	811	669	37	45	1,562	10,514	10,052	20,566
Coblenz .....	8,984	8,566	17,550	253	497	3,872	466	368	10	14	858	7,010	6,826	13,836
Trier .....	8,153	7,760	15,913	290	568	3,377	418	312	11	8	749	6,572	6,189	12,761
Aix-la-Chapelle .....	7,356	6,924	14,280	214	440	3,097	245	201	17	10	473	5,220	5,175	10,395
Total in 1843 ....	310,655	293,817	604,472	21,630	44,018	140,454	12,118	8,854	1,259	1,089	23,320	228,655	215,918	444,573
Ditto 1842 ....	320,435	303,268	623,703	22,114	45,566	140,744	12,427	9,132	1,312	1,189	24,060	223,948	211,234	435,182
Ditto 1841 ....	304,446	287,059	591,505	20,710	42,129	136,188	11,861	8,605	1,239	1,049	22,754	213,677	201,579	415,256

## A.

*A comparative Table of the Number of Marriages, in relation to the whole Population, and the number of Children arising from each Marriage in the State of Prussia.*

## IN THE WHOLE PRUSSIAN STATE.

Triennial period.	1. Marriages concluded in the course of it.	2. Each Marriage stands in proportion to the whole Population, as 1 to	3. Number of Children arising out of these Marriages.	4. Each Marriage produced legitimate Children.
1816	117,448	88	414,664	3·53
1819	111,084	99	458,674	4·13
1822	106,160	109	466,674	4·40
1825	112,171	109	486,720	4·34
1828	104,788	121	467,248	4·46
1831	98,673	132	455,456	4·62
1834	129,818	104	515,892	3·97
1837	128,022	110	518,392	4·05
1840	132,281	113	546,327	4·13
1843	140,454	110	560,454	3·99

## B.

*If the year 1843 be taken separately, we have the following data for the Provinces:—*

	1.	2.	3.	4.
Prussia Proper .....	26,132	92	96,920	3·71
Posen .....	13,493	96	54,036	4·00
Brandenburg.....	17,365	111	64,748	3·73
Pomerania.....	10,265	108	40,674	3·96
Silesia .....	26,355	112	104,826	3·98
Saxony .....	14,168	112	55,504	3·92
Westphalia .....	11,502	124	49,210	4·28
Rhenish Provinces .....	21,174	123	94,536	4·46
Sum Total.....	140,454	110	560,454	3·99



*C.—Statement of the Number of Persons who lived at the end of the year 1843, in the Married State in Prussia.*

Name of the Government District.	Total Population in the District.	Civilians.			For every 100 men there were more women	Military.			For every 100 women there were more men.
		Men.	Women.	Surplus of women above men living in matrimony.		Men.	Women.	Surplus of men above women living in matrimony.	
Königsberg ..	821,946	133,217	133,217	..	...	1,129	1,061	68	6.409
Gumbinnen..	619,553	104,159	104,245	86	0.083	290	290	..	..
Dantzic ....	387,306	61,670	61,688	18	0.029	651	612	39	6.373
Marienwerder	577,575	97,363	97,456	93	0.096	752	711	41	5.767
Posen .....	857,230	142,600	142,538	62*	0.043	931	925	6	0.650
Bromberg ..	432,957	71,710	71,374	336	0.470	192	189	3	1.587
City of Berlin	353,149	43,455	43,639	184	0.423	1,524	1,476	48	3.252
Potsdam ....	782,186	130,111	130,663	552	0.424	1,822	1,750	72	4.114
Frankfort ..	799,772	139,617	140,088	471	0.337	1,066	955	111	11.623
Stettin .....	517,522	85,671	85,892	221	0.258	1,202	1,089	113	10.376
Köslin .....	413,106	67,357	67,681	324	0.481	649	617	32	5.186
Stralsund....	175,722	28,389	28,623	234	0.824	269	253	16	6.324
Breslau ....	1,117,204	189,939	190,063	124	0.065	1,522	1,455	67	4.605
Oppeln.....	939,624	158,427	158,456	29	0.018	1,076	1,046	30	2.868
Liegnitz ....	892,056	162,699	163,279	580	0.356	1,018	1,019	1†	0.098
Magdeburg ..	647,326	109,785	110,621	836	0.762	941	929	12	1.292
Merseburg ..	701,037	117,142	118,078	936	0.799	879	792	87	10.985
Erfurt .....	335,543	55,557	56,305	748	1.346	610	585	25	4.274
Münster ....	418,765	65,510	65,989	479	0.731	229	226	3	1.328
Minden ....	452,877	74,236	74,698	462	0.622	410	381	29	7.612
Arnsberg ....	549,801	86,664	87,629	985	1.137	156	155	1	0.645
Cologne ....	465,363	69,870	70,040	170	0.243	464	413	51	12.349
Düsseldorff ..	851,456	134,882	136,012	1,130	0.839	519	493	26	5.274
Coblenz ....	489,900	77,345	77,755	410	0.530	781	716	65	9.078
Trier .....	478,338	74,970	74,970	..	..	678	591	87	14.721
Aix-la-Chapelle } .....	394,451	60,449	60,534	85	0.140	159	128	31	24.219
Sum Total..	15,471,765	2,542,774	2,551,533	8,759	0.344	19,919	18,857	1,062	5.632

\* More men than women.

† More women than men.

## D.

*Comparative Table of the number of Legitimate and Illegitimate Children born in the following Towns in Prussia, in the year 1843.*

Name of the City or Town.	Number of Inhabitants.	Children born in Wedlock.	Illegitimate Children.	For every 100 Children born in Wedlock, there are Illegitimate
Berlin .....	355,149	9,808	1,826	18.62
Breslau .....	103,204	2,622	664	25.25
Cologne and Deutz .....	88,130	3,084	342	11.09
Königsberg .....	72,336	1,658	522	30.88
Dantzic .....	64,926	1,779	396	22.26
Magdeburg and Suburbs .....	64,516	2,004	230	11.48
Aix-la-Chapelle.....	46,585	1,763	90	5.10
Stettin and Damm .....	44,605	1,336	193	14.45
Posen.....	40,209	1,209	197	16.29
Potsdam .....	37,549	818	107	13.08
Elberfeldt .....	34,956	1,433	94	6.56
Barmen .....	32,985	1,366	51	3.73
Halle .....	30,601	817	143	17.50
Crefeld .....	29,713	1,271	71	5.59
Erfurt .....	29,256	681	90	13.22
Frankfort .....	28,696	816	136	16.67
Coblentz and Ehrenbreitstein ....	26,533	617	53	8.59
Dusseldorff .....	26,134	738	83	11.25
Elbing .....	20,153	583	139	23.84
Münster.....	23,772	581	34	5.75
Trier.....	19,211	419	82	9.57
Halberstadt .....	18,394	583	58	9.95
Stralsund .....	18,103	335	58	17.31
Neisse .....	16,225	291	47	16.15
Brandenburg .....	16,208	473	39	8.25
Bonn .....	16,086	465	87	18.71
Görlitz .....	15,690	448	32	7.14
Wesel.....	15,682	427	27	6.32

## REMARKS ON TABLES A TO D.

The number of new marriages annually concluded since 1816 has risen from 117,448 to 140,454, but if the latter number be compared with the increase of the population since that period, there is a decrease, and the observation that the number of new marriages becomes annually less, in comparison with preceding years, is likewise established in Prussia.

We observe from Table A that in 1816 for every 88 persons a new marriage took place; in 1843 there was only one marriage in 110 persons. If a similar proportion had existed in 1843 as in 1816, there would have been 175,584 new marriages in lieu of 140,454.

If the number of new marriages is compared with the number of children born in the course of the year 1843, we observe that in the average four children may be calculated to each new marriage. In this respect no material change has taken place since 1816. A number of children die when quite young; indeed, of the number that are born, scarcely the moiety reach the fourteenth year. The results of the



recent census prove that each family, on the average, consists of less than five individuals; simple division gives merely 2.08 children of the age of fourteen years to each married couple.

It may be interesting to observe, in glancing over the result of Table B, that the provinces of Westphalia and the Rhine give the largest number of children as arising from matrimony.

It is no doubt well attested by statistical researches, that the majority of men marry before they have reached their forty-fifth year; but it would have been scarcely expected that the per centage was so great; it amounted in 1843 to 93.79 per cent., namely, of 10,000 men newly married there were—

9,379 below 45 years of age.  
518 between 45 and 60 years.  
103 above 60 years.

---

10,000

and among 10,000 females newly married there were

7,931 below 30 years of age.  
1,789 between 30 years and 45 years.  
280 above 45 years.

---

10,000

1. Hoffman considers that marriages take place under natural circumstances with respect to age, or under proportionate ages, when the man has not yet passed the forty-fifth, and the wife the thirtieth year.

2. He uses the term “retarded marriages,” when the husband is between the forty-fifth and sixtieth year, while the wife has not reached as yet the thirtieth year, or where the wife is about thirty years of age, and the husband not yet forty-five years. He considers that from such a marriage not many children can be expected.

4. He designates as marriages for “mutual protection” those where the wife is above forty-five years, and the husband of any age whatsoever, or when the husband is above sixty years, and the wife of any age whatsoever, which generally occurs only in those cases in which the husband is above sixty years, and the wife below forty-five years. When children are the fruits of such a marriage the event must be considered as an exception.

According to this classification there were the following proportions among ten thousand marriages :—

Triennial Period of	Class 1. Marriages under Proportionate Ages.	Class 2. Retarded Marriages.	Class 3. For Mutual Protection.
1816	7,238	2,245	517
1819	7,283	2,227	490
1822	7,569	2,008	423
1825	7,637	1,959	404
1828	7,498	2,061	441
1831	7,188	2,304	508
1834	7,374	2,205	421
1837	7,449	2,154	397
1840	7,645	1,986	369
1843	7,756	1,911	333

It will be observed that the marriages under proportionate ages have increased considerably since 1816. With regard to the different provinces, marriages for mutual protection occur but seldom in Westphalia and the Rhenish Provinces, but they are more frequent in Prussia Proper, Posen, and Silesia. They amount in the latter provinces to 4 among 100 marriages; in Westphalia and the Rhenish Provinces only to 2·79 and 2·61 respectively.

In my former remarks I have already alluded to the apparent discrepancy exhibited in the Tables of Males and Females who live in matrimony, shewing more women than men, which has been explained as arising from the circumstance that the husbands were absent on a journey when the enumeration took place, and were not included in the census. It is likewise to be remarked, that the military, who are not enumerated by civilians entrusted with the census, but by military authorities, exhibit more men as living in matrimony than women. The frequent change of the garrison perhaps prevented the family of the soldier following him. So few military persons comparatively are married, that the general result cannot be affected by it\*.

Hoffman considers that for comparative calculations, the number of married females should be taken as the standard for the number of couples who live in matrimony. Such a comparison gave him in 1822 the result, that the number of marriages decreased comparatively in those provinces where the population was most numerous. He ascribes this to the greater caution observed before a resolution is come to of entering the marriage state.

In due consideration of this reason, he observes that the greatest number of marriages proportionably occur in the eastern provinces; they are less in the middle provinces, and least in the western part of Prussia.

These views are likewise confirmed by the enumeration of 1843. Among a million of souls, there were married, in the province of

Prussia Proper.....	165,926	Silesia .....	174,750
Posen .....	166,663	Saxony.....	170,621
Brandenburg .....	164,627	Westphalia .....	161,159
Pomerania .....	166,453	The Rhine .....	157,362

These data give the remarkable result, that neither Pomerania nor Prussia Proper, being the least populated provinces, give the largest number of marriages, but Silesia and Saxony, where we know the population is much more numerous. The industry of these two provinces offers no doubt the reason. The weavers and the labourers in the manufactories in Silesia and Saxony are mostly married people, and even a number of servants are found in the married state in these parts.

The Table D gives additional information respecting the proportion of children which are born out of wedlock. The 28 towns mentioned in this document comprise the most populous places in the kingdom.

Königsberg, the capital of Prussia Proper, Breslau, the chief town of Silesia, and Elbing, a manufacturing district, have comparatively

\* Table C exhibits the number of persons who lived at the end of 1843 in the married state.



the highest numbers of illegitimate children. Berlin occupies only the sixth place in the list.

If we consider the provincial districts, we have the following number of illegitimate children for every hundred children born in wedlock ; viz., in the Government district of

Königsberg .....	10·53	Oppeln.....	6·83
Gumbinnen .....	9·62	Liegnitz .....	11·89
Dantzic .....	10·28	Magdeburg .....	9·11
Marienwerder .....	6·47	Merseberg .....	11·09
Posen .....	6·14	Erfurt .....	7·75
Bromberg.....	6·00	Munster .....	2·92
City of Berlin .....	18·62	Minden .....	4·97
Potsdam .....	8·08	Arnsberg .....	4·41
Frankfort.....	9·62	Cologne .....	5·02
Stettin .....	8·67	Dusseldorf .....	3·72
Koslin .....	7·92	Coblentz .....	2·91
Stralsund.....	12·01	Trier .....	3·70
Breslau.....	12·09	Aix-la-Chapelle .....	3·18

In this table Berlin, as a district, exhibits certainly the largest number, but we have already seen that, compared with other towns, the moral state is not so lax as in five other cities of less consequence. The great number of young unmarried people who reside in Berlin no doubt contributes in a proportionate degree to the number of illegitimate children. The number decreases considerably in Westphalia, the Rhenish Provinces, and in Posen, and this circumstance has been ascribed to the prevalence of the Catholic religion. The statistical data which I have given above contradict this conclusion in some measure. In Barmen and Elberfeldt, where the Protestant religion prevails, there are few, and in Cologne, which is Catholic, there are many illegitimate children.

Many circumstances may contribute to such a cause ; manners and customs, stricter or more lax ideas respecting morality, and the greater or less difficulty of procuring sustenance and independence, are, no doubt, the chief reasons. Hoffman asserts, that it would be fallacious to conclude from the number of illegitimate children upon the state of morality and manners of a population ; it is obvious, however, that a large number of illegitimate children does not improve the social relations of a state, and that it always presents a doubtful picture of morality.

## MISCELLANEOUS.

*Sixteenth Meeting of the British Association for the Advancement of Science, at Southampton, September 10th—15th, 1846. Proceedings of the Statistical Section.*

The Statistical Section, which had a full attendance of members, under the presidency of G. R. Porter, Esq., F.R.S. held its meetings in the Victoria Rooms. The following were its Officers and Committee :—

*President.*—G. R. Porter, Esq., F.R.S.

*Vice-Presidents.*—Sir Charles Lemon, Bart., F.R.S., Lieut.-Col. W. H. Sykes, V.P.R.S., James Heywood, Esq., F.R.S., Edward Nightingale, Esq.

*Secretaries.*—Joseph Fletcher, Esq., F. G. P. Neison, Esq., Rev. T. L. Shapcott.

*Committee.*—The Mayor of Southampton, William Duckworth, Esq., Henry Hallam, Esq., F.R.S., Mark Phillips, Esq., M.P., M. Ricardo, Esq., James Caldecott Sharpe, Esq., John Shuttleworth, Esq., Thomas Tooke, Esq., F.R.S., G. S. Kenrick, Esq., Dr. King, Monckton Milnes, Esq., M.P., Captain Allen, Rev. Professor Elton, D.D.

The following papers occupied the attention of the Section.

1. Report on the Medical Relief to the Parochial Poor of Scotland, under the former Poor Law. By W. P. Alison, M.D.
2. A Review of the Mines and Mining Industry of Belgium. By Richard Valpy, Esq. Founded on the Report of the Minister of Public Works to the King, dated Brussels, 1st June, 1842.
3. The Limits of Means for Construction, and Returns of our Carrier Inland Trade. By Mr. Beaumont.
4. Oxford University Statistics. By James Heywood, Esq., F.R.S.
5. The Mortality of Children. By Mr. Wigglesworth.
6. The Contrast between Plate-Glass Making in 1846 and 1827. By Mr. Howard.
7. Statistics of the Civil and Criminal Justice of India. By Lieut.-Col. W. H. Sykes, V.P.R.S.
8. Report of the Committee on York Statistics.
9. The Duration of Life in the Members of the several Professions. By William A. Guy, M.B.
10. Report on the Criminal and Miscellaneous Statistics of the Police of Manchester. By Mr. Neild.
11. The Supply of Coal in Great Britain. By Mr. Knowles.
12. Report on the Iron Manufacture of Great Britain. By G. R. Porter, Esq., F.R.S.
13. Statistics of Crime in England and Wales, for the Years 1842, 1843, and 1844. By F. G. P. Neison, Esq., F.S.S.
14. Statistics of Education in Glasgow in 1846.
15. Statistics of the Government Charitable Dispensaries of India. By Lieut.-Col. Sykes, V.P.R.S.



## PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

*Second Ordinary Meeting, 1846-7. Monday, 21st December, 1846.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Gentlemen were elected Fellows:—

William Neild, Esq.		Arthur Scratchley, Esq.
John Le Cappelaine, Esq.		James T. Hammack, Esq.

The following Paper was read:—

The Duration of Life of Sovereigns. By William Augustus Guy, M.D., Hon. Sec.

*Third Ordinary Meeting, 1846-7. Monday, 18th January 1847.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Gentlemen were elected Fellows:—

Robert Clutterbuck, Esq.		Colonel James Shirreff.
John Billing, Esq.		John Braysher, Esq.

The following Paper was read:—

Statistics of the Accounts of the Bank of England, under the operation of the Act 7 & 8 Vict., c. 32. By John Towne Danson, Esq., F.S.S.

*Fourth Ordinary Meeting, 1846-7. Monday, 15th February, 1847.*

Thomas Tooke, Esq., F.R.S., Vice-President, in the Chair.

Thomas Lee, Esq. was elected a Fellow.

The following Fellows were appointed Auditors of the Society's Accounts for 1846:—

Dr. Bowring, M.P.		John Dunlop, Esq.
		John Finch, Esq.

The following Papers were read:—

Statistics of New Zealand. By Joseph Fletcher, Esq., Honorary Secretary.

Statistics of the Sanitary State of the Borough of Reading. By John Billing, Esq., F.S.S.

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\* \* The Tables of Mortality, &c., for the quarter ended 31st March, 1847, are necessarily omitted from the present Number of the Journal, because they have not yet been completed in the office of the Registrar-General.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th April, 1846 and 1847; showing the Increase or Decrease thereof.—(Continued from page 93.)*

Sources of Revenue.	Years ending 5th April.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs.....	17,664,618	18,796,620	1,132,002	....
Excise .....	11,886,085	12,547,657	661,572	....
Stamps .....	7,095,521	7,062,828	....	32,693
Taxes.....	4,224,039	4,257,158	33,119	....
Property Tax .....	5,084,741	5,464,581	379,840	....
Post Office.....	768,000	820,000	52,000	....
Crown Lands.....	130,000	112,000	....	18,000
Miscellaneous .....	188,888	318,161	129,273	....
Total Ordinary Revenue ...	47,041,892	49,379,005	2,387,806	50,693
China Money .....	750,859	667,644	....	83,215
Imprest and other Moneys .	170,846	193,497	22,651	....
Repayments of Advances....	1,516,887	778,506	....	738,381
Total Income.....	49,480,484	51,018,652	2,410,457	872,289
Deduct Decrease .....			872,289	
Increase on the Year .....			1,538,168	

Sources of Revenue.	Quarters ending 5th April.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs .....	3,961,918	4,447,673	485,755	....
Excise .....	1,626,458	1,652,865	26,407	....
Stamps .....	1,685,868	1,817,282	131,414	....
Taxes.....	146,142	130,892	....	15,250
Property Tax.....	1,963,882	2,033,072	69,190	....
Post Office.....	215,000	219,000	4,000	....
Crown Lands.....	45,000	37,000	....	8,000
Miscellaneous .....	91,522	92,593	1,071	....
Total Ordinary Revenue ...	9,735,790	10,430,377	717,837	23,250
Imprest and other Moneys	52,909	53,859	950	....
Repayments of Advances ...	456,473	164,568	....	291,905
Total Income, exclusive of £960,000 received on Loan of £8,000,000, as stated below .....	10,245,172	10,648,804	718,787	315,155
Deduct Decrease .....			315,155	
Increase on the Quarter.....			403,632	

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 5th April, 1847, was 10,661,417*l.*; to which must be added 960,000*l.*, being the first instalment of Loan of Eight Millions) making 11,621,417*l.*; the total charge upon it was 10,992,636*l.* leaving a surplus of 628,781*l.*

The probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund in the Quarter ending 5th April, 1847, is stated at 3,466,960*l.*



## CORN.

*Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week of the First Quarter of 1847; together with the Average Prices for the whole Quarter.—(Continued from p. 94.)*

Returns received at the Corn Office, 1847.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.	Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter.
	Weekly Average	Aggregate Average of Six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average		
Weeks ending 1847.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.
Jan. 2 .	64 4	60 9	44 3	27 2	46 10	45 10	49 8	Jan. 7	4 0
9 .	66 10	62 1	46 5	27 10	46 4	47 0	51 7	14	4 0
16 .	70 3	63 10	50 0	29 6	50 8	49 0	51 11	21	4 0
23 .	73 5	66 0	54 6	31 2	51 6	51 1	54 11	28	4 0
30 .	74 11	68 7	55 11	32 2	55 3	52 7	56 8	Feb. 4	4 0
Feb. 6 .	73 10	70 7	53 5	33 0	55 9	54 3	57 8	11	Duty Suspended.
13 .	71 7	71 10	51 10	38 8	56 8	53 11	56 11	18	
20 .	71 7	72 7	53 6	31 11	51 3	53 5	55 10	25	
27 .	74 7	73 4	55 0	32 4	55 11	53 9	57 5	March 4	
March 6 .	74 4	73 6	54 11	32 3	55 11	53 1	56 1	11	
13 .	74 2	73 4	52 10	31 2	55 1	52 7	54 11	18	25
20 .	75 10	73 8	51 10	31 3	56 8	51 11	57 2	25	
27 .	77 0	74 7	51 4	31 6	56 0	51 10	58 9	April 1	
Average of the Quarter }	72 6	69 7	51 11	31 6	53 4	51 6	55 4	..	..

*Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th January, 5th February, and 5th March, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them.—(Continued from p. 94.)*

## WHEAT.

Months ending.	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th Jan.	110,327	10,462	120,789	42,247	9,365	51,612	200,714	2,519	203,233
5th Feb.	37,620	6,781	44,401	191,165	9,013	200,178	40,221	435	40,657
5th Mar.	52,943	923	53,866	85,193	937	86,130	14,303	450	14,753

## WHEAT-FLOUR.

Months ending.	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th Jan.	287,784	85,930	373,714	45,966	82,720	128,686	485,488	13,329	498,817
5th Feb.	183,525	39,032	222,557	352,490	42,550	395,040	309,849	7,298	317,147
5th Mar.	421,300	19,822	441,122	572,673	16,313	588,986	161,504	10,973	172,478

CURRENCY.

BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 9th January, the 6th February, and the 6th March, 1847.—(Continued from p. 95.)*

ISSUE DEPARTMENT.			
	Weeks ending,		
	9th Jan. 1847.	6th Feb. 1847.	6th March, 1847.
	£	£	£
Notes issued .....	27,552,100	25,504,325	24,193,885
Government Debt .....	11,015,100	11,015,100	11,015,100
Other Securities .....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion .....	11,482,442	9,963,744	9,445,493
Silver Bullion.....	2,069,658	1,540,581	1,548,392
Total .....	27,552,100	25,504,325	24,993,885

BANKING DEPARTMENT.			
Proprietors' Capital .....	14,553,000	14,553,000	14,553,000
Rest .....	3,520,048	3,650,686	3,951,922
Public Deposits .....	5,860,631	4,668,238	6,571,731
Other Deposits .....	9,784,767	9,182,765	9,288,661
Seven Day and other Bills .....	975,005	952,689	846,860
Total.....	34,693,451	33,007,378	35,212,174
Government Securities, including Dead Weight Annuities .....	12,757,326	12,313,175	11,990,079
Other Securities .....	14,464,948	14,019,936	16,905,705
Notes .....	6,715,255	5,890,855	5,714,740
Gold and Silver Coin.....	755,922	783,412	601,650
Total .....	34,693,451	33,007,378	35,212,174

COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 2nd January, 30th January, and 27th February, 1847.—(Continued from p. 95.)*

Banks.	2nd Jan. 1847.	30th Jan. 1847.	27th Feb. 1847.
England—Private Banks .....	4,526,006	4,687,782	4,549,980
Joint Stock Banks .....	3,138,498	3,267,903	3,198,082
Scotland—Chartered, Private, and Joint Stock Banks.....	3,787,151	3,600,731	3,503,300
Ireland—Bank of Ireland.....	4,212,225	4,115,300	4,026,950
Private and Joint Stock Banks .....	3,303,189	3,144,126	3,003,103
Total.....	18,967,069	18,815,842	18,281,415



## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending March 31, 1847; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 96.)*

COUNTIES.	January.	February.	March.	TRADES.	January.	February.	March.
Metropolis.....	30	33	35	<i>Agriculture and connected Trades.</i>			
Bedford .....	...	...	...	Farmers .....	1	1	1
Berks .....	...	...	2	Agricultural Implement Makers, &c. ....	...	...	1
Bucks.....	...	1	...	Corn Factors .....	...	1	2
Cambridge .....	1	1	...	Millers and Malsters .....	...	1	4
Cheshire .....	...	...	...	Hop Merchants .....	...	...	...
Cornwall .....	...	1	1	Brewers .....	3	1	...
Cumberland .....	...	1	...	Horse and Cattle Dealers, and Woolstaplers .....	1	3	1
Derby .....	...	...	...	<i>Mining and connected Trades.</i>			
Devon .....	5	4	1	Mining Firms .....	...	...	...
Dorset .....	...	...	...	Blasting Works .....	...	...	...
Durham.....	3	...	2	<i>Manufactures.</i>			
Essex.....	1	4	2	Woollen Manufacturers .....	...	2	6
Gloucester.....	6	4	2	Cotton „ .....	2	...	...
Hants.....	4	2	1	Linen „ .....	...	...	...
Hereford .....	...	...	...	Silk „ .....	...	...	...
Hertford .....	2	1	...	Printers and Dyers .....	...	2	1
Huntingdon .....	...	...	...	Lace Manufacturers .....	...	...	3
Kent .....	3	3	5	Hosiery „ .....	2	...	...
Lancashire.....	16	15	19	Hardware „ .....	3	...	...
Leicester .....	...	...	...	Earthenware „ .....	...	...	1
Lincoln .....	...	...	...	Glass „ .....	...	1	1
Middlesex (exclusive of the Metropolis) }	2	1	3	Paper „ .....	1	...	1
Monmouth .....	...	...	...	Builders .....	4	7	7
Norfolk .....	1	3	1	Miscellaneous Manufacturers....	12	9	6
Northampton.....	...	...	...	<i>Commerce.</i>			
Northumberland .....	...	...	2	Bankers and Merchants .....	6	7	5
Nottingham .....	2	3	2	Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally .....	15	9	11
Oxford .....	...	...	...	<i>Retail and Handicraft Trades.</i>			
Rutland .....	...	...	...	Bakers .....	7	3	...
Salop .....	...	...	3	Butchers .....	...	...	1
Somerset (including Bristol) }	4	3	4	Corn and Hay Dealers .....	...	...	...
Stafford .....	1	...	...	Innkeepers and Victuallers.....	8	7	8
Suffolk .....	...	...	...	Wine and Spirit Merchants ...	1	5	5
Surrey (exclusive of the Metropolis) }	1	2	...	Dealers in Grocery, Drugs, and Spices.....	5	5	13
Sussex .....	1	...	3	Makers of, and Dealers in, Clothing .....	7	10	8
Warwick .....	2	3	5	Makers of, and Dealers in, Furniture .....	1	...	1
Westmoreland .....	...	...	...	Coach Builders .....	...	...	...
Wilts .....	1	...	...	Miscellaneous .....	20	18	26
Worcester .....	...	...	1				
York (East Riding) ...	2	2	6				
„ (North Riding) ...	...	...	4				
„ (West Riding) ...	8	5	8				
Wales.....	3	...	1				
Total .....	99	92	113	Total.....	99	92	113





# DISTRICTS.

Note. The portions of each District marked A & B are the portions of least & most instructions respectively

- I Southern Agricultural and Maritime Counties.
- II South Midland and Eastern Agricultural Counties
- III Metropolitan Counties.
- IV North Midland & North East Agricultural Counties.
- V South Midland Agricultural Counties with dispersed domestic Manufactures.
- VI Western & chiefly Celtic Agricultural & Mining Counties
- VII Northern Agricultural and Mining Counties.
- VIII Northern & Midland Mining & Manufacturing Counties

## MAP OF ENGLAND, EDUCATIONAL, MORAL, &c.





# QUARTERLY JOURNAL

OF THE

## STATISTICAL SOCIETY OF LONDON.

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SEPTEMBER, 1847.

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*Moral and Educational Statistics of England and Wales.* By JOSEPH FLETCHER, Esq., Barrister at Law, Hon. Sec. Statistical Society of London.

[*Read before the Statistical Section of the British Association at Oxford, 29th June, 1847.*]

I WISH to submit to the Section a few facts illustrative of the moral and intellectual condition of the English people. These facts form a very imperfect body of evidence; but gentlemen who are acquainted with the true nature of Statistics, or of science in general, will not therefore reject it, if it be the result of continuous and conscientious labour, applied to remove the frontier of the doubt and ignorance which surround us but one step further back. Those who have expected our science to spring into existence ready armed like another Minerva, and complain that Statists can know nothing because they do not know everything in the field of investigation which they propose to themselves, ask of us what they ask of the labourers in no other department of inquiry, and might as well refuse to Newton his immortal name, because he did not discover the uttermost planet recently detected by Adams and Leverrier. It might rather be rejoined, that the more neglected are Statistics, the greater the reproach upon the age and country in which their consequent imperfection is witnessed. They can have no existence in a state of barbarism; for rude despotism acts without asking many questions. In a state of society somewhat advanced, they enter imperfectly into the arts of government, in the shape of hasty inductions from narrow experience, applied as general truths in the exigency of the moment. It is only in the highest state of modern civilization that we see governments keeping up some acquaintance, by extended and refined observation, with the real condition of the masses of their people; for in social as in individual history, it is by no means the earliest stage of progress in which we ask ourselves what is really our own moral constitution, what is the practical course of our own conduct, and what are the real springs of our own actions. Yet, to society at large, such questions are as essential as to the individual; for not a single prevailing defect will remain without its reflected and reproducing evil in our united conduct, whenever it shall please God that we be tried in a manner to test its existence or its dominance. Most of our societies of philanthropy and of missionary labour assume this truth as their basis; and it is not less felt in legislation for the reformatory discipline of gaols and workhouses, and for the advancement of public



education. The necessities of art even in this case have had to awaken science to her aid, as in so many and such various other fields. We have more reason, therefore, to be thankful for the existence of a science demanded chiefly by the arts of philanthropy, than discouraged by its imperfections.

All that we practically know of men individually is defective enough; and yet more defective is our personal knowledge of the extent to which the qualities which we do perceive and appreciate in others, prevail in the great mass of society, in places, and among classes, and under circumstances, entirely beyond the reach of any one person's observation; the fruits of which, however extensive it may be, will not have the exactitude of an exhaustive enumeration of well-defined facts. It is to such an enumeration of facts, therefore, that the Statist looks with intense interest, whether of those relating to whole states, which can be collected only by governments and on a limited scale, or those which are elaborated in much greater detail and applied to proportionally limited parts of the population, at the expense of individuals or of societies, such as the Statistical Societies of London and Manchester. That these censuses of facts are not inquisitorial, in the injurious sense of that term, is proved by their being more extensive and varied, and more easily made, just in proportion to the freedom of each country's spirit and institutions.

As it is of the whole kingdom that I purpose to speak, it is of the *public* enumerations that I must now chiefly make use; and by the nature of the subject I am required to use principally the last Census of the Population; the Income Tax Returns; the Reports of the Registrar-General of Births, Deaths, and Marriages; the Home Office Tables of Criminal Offenders; the latest Reports of the Poor Law Commissioners; and a Summary of Savings Banks, published by the Barrister appointed to certify their rules. It is by the agency of such departments as produce these documents that the State takes cognizance of all or of certain classes of its subjects, at various periods, and under the occurrence of very dissimilar events; and from the records of this momentary cognizance the following results are derived; while many more of equal interest may be obtained by those who have the desire and the opportunity to elaborate them. I contribute on the present occasion only the results of some first efforts, which, if they serve to indicate the direction in which another may profitably proceed, will not have been made in vain.

All the first figures of such records as are now adduced, profess to register, exhaustively, certain definitely described circumstances, as those attaching to a stated number or class of individuals, at a specified time, in a place with limits accurately described; and all the value of the results is involved in the character of the first observation never being obscured by any subsequent operations, as, by averages so crude as to conceal all distinctiveness of character; or by applying an ascertained rate of progress in one set of elements to another set, as that of population to crime, for instance; or by the comparison of results between which no parity really exists. Rather than rush to one generalization upon aggregate results, it is better to retain the facts in manageable groups, by means of which to compare one class with another, one district with another, and one period with another; and by the alternate use of analytical and synthetical methods, to bring the several

elements into every possible combination, and detect the laws of their coincidence and relationship, or obtain new views as to the direction which should be given to more refined observation.

The man who studies society, however, labours under a great difficulty in being entirely denied the use of experiment, and limited most rigidly to observation; the observation of elements most subtilly combined, in a state of unceasing change, and wholly beyond his control. Analysis, therefore, in the sense of the chemist, is absolutely impossible; but by exhaustive enumerations of facts which are strongly indicative of the existence of many others, or are their invariable concomitants, we get a means of detecting the excess or deficiency of certain social elements in definite classes or localities; and by multiplying these lines of observation, and the combinations in which they are arranged for purposes of comparison, we gradually arrive at higher and safer inductions, which will sometimes corroborate principles which we have reached by deductive reasoning from the moral elements of individual character, and by observations on society in the limited field of our personal experience, and at others will present irreconcilable results, which the bigot of theory will despise, but which the man of science knows how to prize as uncut gems. He who seeks facts merely to illustrate a hypothesis in which he believes with a blind faith, will throw them away in disgust; but he who uses a hypothesis merely to discover truth, will, on the contrary, abandon its use in the moment that he arrives at facts which resist all efforts to reduce them into accordance with it.

Neither, in the present state of statistical knowledge, when a practical acquaintance with the value of its figures is limited to a few, is it beneath our endeavours to arrange the results to which we attain under the true names of the original data, in an order which can readily be understood; and they will then have a useful practical influence, while yet, in the eyes of the man of science, they offer but imperfect indications towards the ultimate discovery of higher truths. For notwithstanding that Statistics are often despised for the uncertainty which attaches to their use in the hands of the unpractised, the uncandid, or the prejudiced, they exercise, even in their imperfect state, an important sway over all inductive reasoning from social experience; and since we cannot live a single day without acting on the dictates of such reasoning, however imperfect it may be, there is no field in which a new truth so rapidly forces upon the world a practical recognition as in that of Statistics. It is with this view, that, in framing the accompanying tables, I have throughout adhered to one general division of the kingdom into distinct industrial provinces, drawn with as much accuracy as was permitted by the large and varying size of the counties; the civil divisions which are the integral ones for nearly all my data. These provinces are portrayed in the accompanying map, which will serve as a key to the whole of the following tables. A glance down the vertical columns of these tables will convey all that could be pictured forth by an expensive series of shaded maps, showing the relative intensity of each element; at the same time that their horizontal lines will convey the collective results in a manner far more compendious than could be obtained by any pictorial means.

Owing to the insufficient extent, defective character, and early abuse of the public endowments for popular education, which arose out of the



spirit of the Reformation, the *labouring* classes of England and Wales generally remained insensible to the want of education, until awakened to it by labours of a missionary spirit towards the close of the last century. The Sunday schools were the first silent but powerful engine employed to break into the matted sward of ages of ignorance and degradation; and yet these date their origin only from the labours of Mr. Robert Raikes, and the Rev. Mr. Stock, at Gloucester, in 1781. The Society for the Support and Encouragement of Sunday Schools throughout the British Dominions was instituted in 1785, and the Sunday School Union only in 1803. The *day* schooling of the same classes is of yet more recent origin; for it cannot be dated earlier than 1798, when Dr. Bell published his "Experiment on Education" made at the Male Asylum at Madras, and Joseph Lancaster began practically to develop the same principles in the schools now designated British Schools. Nor was it until 1808 that the British School Society was founded on its present basis, nor until 1811 that the National Society was established. The next great step was the establishment of the first infant school in England in 1818; and yet it was not until 1836 that the present Home and Colonial Infant School Society was formed, for "the improvement and general extension of the Infant School System on Christian principles, as such principles are set forth and embodied in the doctrinal articles of the Church of England." The history of the more recent efforts to introduce new life, improved methods, and extended views into the education of the poorer classes is, in great part, contained in the public documents which describe the various institutions that have been aided from the grants annually made by Parliament; but I shall have to allude to the schools connected with the several societies above mentioned, in giving an outline of the several districts into which the whole kingdom is now divided. These are eight in number; and under the head of each, I have elaborated, county by county, every available test of their social organization, and of the state of instruction and morals in each. The counties included under each division are arranged in two groups, according to the comparative amount of instruction in each, as ascertained by the test of the marriage registers; and the results obtained, first, by a comparison of each group, and next, of the several divisions of each, will be found worthy of attentive regard.

First, I would distinguish the purely agricultural districts with thriving country towns, sea-ports and places of genteel resort. Such are, for the most part, I. The southern, agricultural, and maritime counties of Kent, Sussex, Hants, Dorset, and Devon; II. The south midland and eastern agricultural counties of Essex, Suffolk, Norfolk, Cambridge, Huntingdon, Oxford, Berks, and Wilts; and, omitting from present notice the peculiar district formed (III.) by the two metropolitan counties, I may add likewise, IV. The north midland and eastern agricultural counties of Lincoln, Rutland, Northampton, Hereford, and Salop. In the rural parishes of such districts it is difficult for schools, on the principles of the British and Foreign Society to subsist. Where there are any, they are supported either by some one person of property, or by the members of dissenting congregations, too weak to raise them above the character of "village schools;" by which name I would designate those in remote places, under untrained teachers, which are

really of the character of private schools aided to a very small extent by subscriptions. Her Majesty's Inspectors of National Schools, therefore, in describing the state of the rural National schools, describe in effect the state of public day-schooling generally in such localities ; but I am especially concerned to point out that it is in the thriving *country towns* of these very agricultural districts that are generally to be found the best British school committees, and, consequently, the best British schools ; because, among the middle classes of these towns, there is, relatively to the country at large, a superior amount of education and of leisure. Their efforts, too, are frequently encouraged by resident persons of somewhat superior means ; and their combined exertions do much to invigorate, through emulation, the other schools in the neighbourhood. In these towns, likewise, the several denominations of dissenters generally agree in the patronage and support of the same public day-schools, on the principles of the British and Foreign Society, in which they are usually aided by the subscriptions of liberal churchmen.

The *second* class of districts is that in which the predominant industry is still agricultural, but in which there is a considerable scattering of light manufactures among the cottages of the poor, employing the hands of the women and girls to the neglect of their household duties, and those of the little ones to their deprivation of nearly all resort to school except in name ; the school becoming a little pestiferous workshop, kept by some dame, with whom it is impossible for the best school to come in rivalry, unless it teach the trade of the place ; and even then it will have but very ill success, because, in endeavouring to do something for the bodily health and moral welfare of the child, it does not teach it to work nearly so well. Such trades are straw-plaiting, lace-making, &c., in Hertfordshire Buckinghamshire, and Bedfordshire ; and glove-making, &c., in Somersetshire ; and their effects are plainly traceable, I think, in the preceding tables. I have therefore made a Vth group of them, separate from the other agricultural counties, though they are surrounded by them. The Committees of the schools on the principles of the British and Foreign Society, in the several towns of these districts, are equal to any in the kingdom in zeal and judgment, in so far as I have had the pleasure of making acquaintance with them ; but it is with difficulty that they can keep together schools of the lower class of children, of the proper ages ; and I doubt not that this depressing effect is experienced still more seriously in the rural parishes under the observation of Her Majesty's Inspectors of National Schools. It is worthy of remark, indeed, that the counties well known as containing the most miserable of all our rural population, are conspicuous equally for their much larger proportion of early marriages, and their excess of ignorance.

Not without strong resemblances in social condition to those already noticed, I would next direct attention to the agricultural and mining districts, chiefly occupied by a Celtic population, in the western parts of South Britain. This will form a VIth group of counties, comprising Cornwall, Monmouth, South Wales, and North Wales ; the population throughout the whole of which, except Cornwall, is at present receiving, in effect, little more than Sunday school instruction in the Bible, in Welsh, owing to the obstacle of language. It will be interesting to



compare with these the VIIth group, composed of the northern agricultural and mining counties of England, which resemble them very closely in natural features, and consequently in the occupations of the people, but the latter are chiefly of Scandinavian descent. Their dialects are often far from being intelligible to a cultivated ear, but contain most of the Saxon roots of our language, and therefore offer comparatively little difficulty to the progress of instruction, especially in reading the authorized version of the Holy Scriptures, which adheres as much as possible to these roots. In the rural parts of both districts, owing to the poverty and dispersion of the people in regions chiefly mountainous, it is yet more difficult than in any other to maintain British day schools. In some of their country towns they have judicious and liberal patrons and managers; but in the districts occupied by the masses of mining population, which would adopt them in preference to any other, if they supported day schools at all worthy of the name, they are languishing and neglected, owing mainly to that dissociation of the masses from every superior class which has already been described.

It is the VIIIth, the great northern and midland mining and manufacturing district, comprising the West Riding of Yorkshire, Lancashire, Cheshire, Staffordshire, Derbyshire, Nottinghamshire, Leicestershire, Warwickshire, Worcestershire, and Gloucestershire, which exhibits, however, the most remarkable features in respect to the support of day schools. To the agricultural tracts comprised in these counties, and to their country towns, the observations applied to the like districts and places in other parts of the kingdom equally apply; but in the mining and manufacturing localities, which distinguish them so markedly from other parts of the empire, there are circumstances, as in the mining districts also of the North and the West, peculiarly unfavourable to the prosperity and even the existence of day schools, in the very spots where they are most needed. It will not be expected that these districts should comprise places of genteel retirement from other quarters; on the contrary, most of the fortunate people who abandon the cares of business abandon also the locality of it; its smoke, its dirt, its bustle, its deformation of the face of nature, and the independent rudeness of its millions. The mining and manufacturing districts are purely places in which to work and make money, not to be at rest and enjoy it. The former is naturally the great object of its master minds and master men; and they can scarcely be blamed for leaving the locality when this object is attained. While resident, even the vastness of the population assembled around them produces much of that extinction of the ties of "neighbourhood" between the different classes of society which is likewise felt in great towns, but without the countervailing influences of higher instruction which there sometimes come in place of them; and this is not a result (any more than the others) to be charged as a reproach on any of the parties, while it is not the less a great social misfortune. Such circumstances entail serious results upon the moral and physical well-being of the population, which it behoves a statesman to regard with solicitude ere he have to regard them with alarm. Everybody is too busy in the daily moil of business to engage personally in the moral administration of his neighbourhood. The day schools generally are destitute of committees,—even of ladies,—the last to abandon their

charge; they are also few in number, and far between, and in a state of dirt, disorder, and neglect, which makes them of doubtful value even where they are to be found. The exceptions are in the largest central towns of these districts, where a very small proportion of the schools receive attention from a few ardent friends; or where a minister of the Gospel is peculiarly impressed with the value of the day school as one of the first and most valuable openings to spiritual instruction, and begs hard to get one barely supported in the Sunday school-rooms; or where a large manufacturer, sensible of the great social trust which devolves upon him as the captain of the industry of his poorer neighbours, maintains wholly or chiefly at his own expense a first-rate school.

It is quite needless, in the absence of all statistics which describe the *ages* of the children in school, or the quality of the schools which they frequent, to weigh the slight validity which belongs to comparisons of the number in any one class of schools, or in every class of schools, with the number found by the census to be living between 5 and 15 years of age. To compare the total number in all descriptions of places called schools, with the number above the lowest of these ages, can afford no useful result whatever, since a very large proportion of those enumerated as scholars, especially in the manufacturing districts, will be infants below that age, placed under dames merely to be kept in safety. The education of that portion of the children of the unskilled labourers in such districts, who go to school at all, is, in effect, little more than a Sunday school education of a most irregular and imperfect kind; invaluable in place of the darkness and rudeness which characterize the unapproached heathen ignorance around them, but too often regarded as all-sufficing for secular as well as religious instruction; to the restriction of too many of its devoted young friends to little more than the bare task-work of teaching individually the mechanical arts of reading and spelling out of the text of sacred writ once a-week, instead of their precious minutes being employed in the rehearsal and explanation of passages, to the purport of which their own hearts might, with God's blessing, be more fully awakened, in the ardent desire to communicate it to another. It is not of the best Sunday schools of the large towns that I now speak, but of those which are attended by the children of the myriads scattered over the face of the outlying manufacturing districts, in which may every week be seen, in full operation, the same system (affected by all classes for various reasons) of doing the work of the day school on the Sabbath. The wealthier it appears to relieve from further care and expense; the teachers are heart and soul in the cause; their leaders are too satisfied with the general purpose of their present task, without sufficiently seeking to purify and elevate it; and the parents approve of it, for they also seem to get their children's "learning" for nothing; nay, they can even confer a favour by permitting them to receive it. If evidence were required to show that such a system is not good, it would be found in the accompanying tables, by comparing the West Riding of Yorkshire and Lancashire with the agricultural and mining districts north of the Humber, in the same latitude; and the progress making in the former with the progress making even in the least educated agricultural counties. Yet Yorkshire and Lancashire are by



no means in the lowest condition. Everything points to the more southern districts of the frame-work knitters of Leicestershire, the earthenware makers of Staffordshire, and the coal and iron workers of Staffordshire and the borders of Worcestershire and Warwickshire, as much lower in the scale of civilization.

In the very districts, therefore, in which the greatness of the aggregate population produces depressing influences, which demand for their counteraction a higher moral character among the people, than will enable a scattered population to tread their less hazardous paths of life with safety, there is the greatest amount of ignorance, the greatest deficiency of local means and dispositions for its removal, and every aggravation which neglected sanitary police and bad domestic arrangements can add to the catalogue of evils. In the absence of educated "classes," interesting themselves in the elevation of the people around them, it is the Christian congregations that present the only form of organization which voluntary exertion can employ; and it is for the ministers of all denominations to say whether they and their congregations are in a condition to undertake the day schooling of the whole of the population around them, and whether they would be able to get the attendance of the children at proper ages, even if they had provided the schools. Their answer will be, frankly, "*No*," to both questions, and though even these districts are not positively retrograding, but the contrary, in the amount of their instruction, yet the growth of evils against which its progress is matched is yet more onward; and quietly to sit down and accept the domination of these evils as a great fact, without further and extraordinary effort, is not becoming either to the Christian churches or to the Christian legislature of England, while society is possessed of such ample resources to combat with them.

Even in the country towns, where the schools are of highest efficiency, it is universally acknowledged that there is a considerable class whose children are unamenable to any proper instruction or control whatever; and it is important to bear in mind that, whatever may be the deficiency in the supply of the means of education in the towns and manufacturing districts generally, it is, on the whole, greater than the demand in the perceptions of the parents of the children, notwithstanding that, in the recent "good times," and in all similar times, they have been well able to afford the few pence per week demanded by so important a duty to their offspring as their proper schooling. Where there are rival schools amidst a population of sufficient magnitude, the parents who send their children at all are shrewd enough to know which is the best, so far as the secular instruction is concerned, about which alone they care, and, accordingly, crowd their children into it, unless deterred by some pique or indirect advantage; but still there is a vast mass who do not care to send their children to any school. The most callous to their interest in this respect are those most lost in heathenish indifference to sacred subjects; the little commonalty of the public day school consists, almost wholly, of the children of worshippers; and hence an eternal obligation will always be due to the Sunday schools, to the extent to which their labours are blessed; and the greatest aid, which, humanly, can be extended to them is by supplementing their labours, and, consequently elevating the sphere of them, by means of the day school.

The general contempt for the day school is most disastrous in its effects upon the home of the labourer as well as upon his character. The little arts of domestic industry which should be acquired by the girls are very ill acquired. Of domestic economy they have little conception. A spirit of rude "independence," as it is called, restrains them, as they grow up, from acquiring that better domestic training which service in well-regulated households of the middle and upper classes would give them; insomuch that the districts most notorious for their poverty and periodical distress are precisely those in which it is most difficult to obtain household servants. They are, indeed, districts of a sort of industrial gipsydom, in which the young women, boys, and girls, can find employment in some simple manufacturing occupation, without submitting to the discipline of an employer's family, while the "little ones" are employed in nursing the "babies," and vainly endeavouring to discharge household offices which belong customarily to the elder females, and are never therefore properly performed; the children being thus deprived of both domestic and school training.

The British Schools in small towns or large villages in the rural districts are likewise in a struggling position, through the prevalence of like indifference in the surrounding districts, combined with narrower means. So far as this class of schools is concerned, therefore, their penetration from the thriving towns, where they have always friends enough to support them, whether into the agricultural or the manufacturing districts around is equally difficult; with this only difference, that in the latter the Sunday school occupies the place which is held by the National and Sunday school combined in the former. At present such Sunday schools, with two or three evenings in the week to teach writing and arithmetic (which, in some, are also taught on the Sabbath), accomplish somewhat of the progress which is effected by ordinary national schools in the rural districts; and to a great extent they are, like them, infant schools as well as schools for elder children. But that they are keeping pace with the national schools of the rural districts, in the communication of the first elements of secular instruction, is disproved by the figures in the accompanying table, which exhibit the relative progress making in the capacity to write, in the most ignorant agricultural and manufacturing counties respectively. This excessive reliance on the Sunday school, therefore, deprives the children of proper resort to a day school before they are sent to work, and engrosses their Sabbath in a hard *secular* task during the term of their employment, when it is morally incumbent on all the parties concerned to exert themselves for the provision of a good day school, rather than to take to their hearts the deceptive flattery that they have done their duty by patronizing and by labouring in the Sunday school only. As for the support of decent day schools, there are almost means enough in the prevailing "good times" among the people themselves, if they were but moved to pay the 2*d.* per week generally paid by each child in a British school, which, with very little assistance, would bring in a return to them and their neighbours well worth an incalculable expenditure.

In the accompanying tables, the cardinal classification of the counties into districts is made on the evidence of the occupation abstract of 1841, with a further reference to their geographical contiguity, and the



different origin of the great body of their population; and a further division, which separates each district into subordinate ones of most and least instruction, is made on the evidence contained in the column headed "Ignorance;" careful regard being had to the geographical continuity of these subordinate divisions also. By this means we get a double division of the kingdom, 1st, by the circumstances which exercise the greatest influence upon its social organization, and, 2dly, by those which indicate to some extent the degree in which direct endeavours for the moral and intellectual advancement of the people have been brought actively to bear in each part of it. The geographical identity given to all these divisions will serve not only as an artificial memory for the retention of the results, but form a convenient index for all the data which either now are or which may shortly be available, to elucidate the like subjects; for the circumstances upon which it is based are not such as will undergo a rapid change. The counties comprised in each district and sub-district are enumerated in the Tables, pp. 215, 222.

Column 1. The counties are grouped according to their prevailing industry and geographical position, and each group is then divided into two sections, in one of which appear the counties of least, and in the other those of most instruction.

Columns 2—7. From the enumeration abstracts of the census of 1841, with express calculations for each district and section.

Columns 8—10. From the materials contained in the real property return, No. 102, of the House of Commons' papers, during the session of 1845. The several Ridings of Yorkshire are not distinguished in that paper, and I have therefore been compelled to distribute the total assessment of that county amongst them in the proportion of their population; and hence arises the factitious equality which will be observed.

Columns 11—13. From the materials contained in the occupation abstract of the census of 1841.

Columns 14—22. From the tables and the materials contained in the annual reports of the Registrar-General.

Columns 23—25. From the materials supplied by the Parish Registrar Abstract published with the census returns of 1831. They are inserted to check the figures in the next three columns.

Columns 26—28. From materials contained in the sixth annual report of the Registrar-General, which contains an abstract of the number of entries which are obviously of illegitimate children, upon the register of births for the year 1842. There is a general coincidence in the results obtained from these different sources, sufficient to establish their value; but there is a marked failure of it in the case of Monmouthshire and South Wales, which throws a light of suspicion upon the accuracy of the more recent results, as regards this district; for the want of agreement does not extend to other border counties, or to North Wales. This failure of coincidence being chiefly in regard to a population thickly aggregated around the coal and iron works, and notoriously in a very low moral condition, it is rather to be concluded that the Registrars, whose books do not require them expressly to distinguish the illegitimate children, have entered without any mark of distinction the children of many parents living together, but not in

wedlock, which, in the baptismal registers, would have appeared as illegitimate children. Under these circumstances, I am disposed to adopt the testimony of the parish registers of 1830, as more accurately describing the state of this district than the accidental evidence derived from the present registers of births. So marked a deficiency of course affects the averages of other districts, but affecting them all equally, their relative value is not destroyed. If, however, their general tenor had not been supported by the earlier record, I should have preferred the results of the latter alone, though less recent; for while defective in the numbers registered, it must be tolerably accurate in the proportions of the illegitimate among those brought into account.

Columns 29—31. From the materials contained in the twelfth annual report of the Poor Law Commissioners, 1846. The Poor Law counties are not quite co-terminous with the several counties, as their population is here given; but the per centages are struck on the population to which the Poor Law returns refer. The year 1844 was one of manufacturing prosperity, and hence, in part, the favourable state of the manufacturing counties as compared with the agricultural; but the latter have generally an excess of pauperism, notwithstanding the constant influx into the former in search of employment.

Columns 32—34. From the materials contained in a "Summary of the Savings' Banks of England, Scotland, Wales, and Ireland," by John Tidd Pratt, Esq., the barrister-at-law appointed to certify the rules of Savings' Banks and of Friendly Societies, &c., &c. London, 1846. The districts for which the banks serve are not exactly co-terminous with the several counties.

Columns 35—37. From the criminal tables 1842, 1843, and 1844, compiled by Mr. Redgrave of the Home Office, and annually laid before Parliament. In the case of the metropolitan counties, a correction has been made by distributing the committals to the Central Criminal Court to the several counties in proportion to the population of each comprised within the limits of that court; a rude correction, but one which gives a nearer approximation to the truth than a reference of the whole of those cases to the county of Middlesex. In like manner the crime of Yorkshire has been distributed among its several Ridings.

The summary table will be found to merit a closer examination than is involved in a comparison merely of the more instructed districts with the less instructed districts collectively; for between averages so large as to involve half a kingdom, the distinctions are necessarily less marked than between those which concern each of the eight provinces, into which the whole of South Britain is here divided. In the very first column, too, it is well worthy of notice that the metropolitan and the northern and midland mining and manufacturing counties jointly, —the regions of "great towns" and their influences—comprise about half of the whole population. The latter alone comprise upwards of one-third, the most central, and doubly the most condensed of all, except the metropolitan population; and the characteristics which they exhibit will therefore be observed with great interest throughout. Again, the mining and agricultural Celtic region of the west, and that occupied by a people of Scandinavian descent in the north, each contain about a million and a quarter of inhabitants, under circumstances



*Summary Table; comparing the different Districts of England and Wales in  
and Ignorance, its Providence and*

Divisions.	Inhabitants.	Distribution of the People.		Features of Social Organization.			Real
DISTRICTS.	Population in 1841.	Number of Inhabitants to 100 Statute Acres in 1841.	Proportion per Cent. of Inhabitants to 100 Acres above and below the Average of England and Wales.	Proportion per Cent. to whole Population of Domestic Servants in 1841.	Agriculture, or as Graziers, Gardeners, &c.	Trade, Commerce, and Manufactures.	Calculated Value of Real Property which should be found in 1843 in Proportion to the Population in 1841, on the Average of all England and Wales.
Column 1.	2.	3.	4.	5.	6.	7.	8.
<i>Least Instructed Districts:—</i>							£.
2. The South Midland and Eastern Agricultural Counties (exclusive of the Metropolitan) . .	1,877,247	32.4	—24.6	5.8	13.6	10.4	10,126,138.72
5. The South Midland Agricultural and Manufacturing Counties .	857,108	39.1	— 9.1	6.1	11.8	12.9	4,623,363.09
6. The Western (Celtic) Agricultural and Mining Counties .	1,387,237	23.3	—22.5	6.5	10.0	10.0	7,482,954.73
8. The Northern and Midland Manufacturing and Mining Counties . . . . .	5,531,747	72.3	+68.1	4.9	5.2	23.1	29,839,034.30
Total of the Least Instructed Districts .	9,653,339	44.8	+ 4.2	5.4	8.1	17.8	52,071,490.84
<i>Most Instructed Districts:—</i>							
1. The Southern Agricultural and Maritime Counties . . . .	1,911,597	37.0	—13.9	6.9	9.5	11.0	10,311,427.56
3. The Two Metropolitan Counties	2,159,314	330.1	+667.7	9.3	2.0	18.9	11,647,648.49
4. The North Midland Agricultural Counties . . . . .	936,058	24.5	—43.0	7.1	14.0	11.0	5,049,230.69
7. The Northern Agricultural and Mining Counties . . . .	1,246,433	23.2	—46.0	6.0	8.6	13.8	6,723,437.82
Total of Most Instructed Districts . .	6,253,402	41.7	— 3.0	7.6	7.6	14.3	33,731,744.56
Balance in favour of the Least Instructed Districts . . . . .	..	3.1	7.2	..	.5	3.5	..
Balance in favour of the Most Instructed Districts . . . . .	..	..	..	2.2	..	..	..
Grand Total of England and Wales . .	15,906,741	43.0	..	6.3	7.9	16.5	85,803,235.40

in many respects similar; and these, therefore, offer points of comparison of peculiar interest. Even the more purely agricultural counties of the eastern and south midland parts of the island, containing nearly two millions of inhabitants, and those to the north of them (east and west) containing nearly another million, will be found to offer important contrasts, not only with the regions already mentioned, but with that comprising dispersed manufactures among its agricultural population, nearly a million in number, and that of the southern maritime counties, comprising an unusual proportion of residents of independent means, and a total population of nearly two millions.

The distribution of the population in the hilly regions of the west

*respect to the Distribution of the Population, its Social Organization, its Education Improvidence, and its Crime.*

Property.		Realized Properties			Progress of Instruction.			Ignorance.		
Actual Annual Value of Real Property assessed to the Property and Income Tax in each County, for the Year ending April, 1843.	Proportion per Cent. of Real Property in 1843, above and below the Average to the like Population throughout England and Wales.	Calculated Number of Persons of Independent Means which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Persons of Independent Means, according to Census of 1841.	Proportion per Cent. of Persons of Independent Means in 1841, above and below the Average of all England and Wales upon the like Population.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending 30th June, 1840.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending 31st Dec., 1844.	Excess or Deficiency per Cent. of the Men Signing the Marriage Register with Marks in 1844, as compared with 1839-40.	Calculated Number of Men Signing the Marriage Register with Marks which should have been found in 1844, on the Average of all England and Wales upon the like Number of Marriages.	Actual Number of Men Signing the Marriage Register with Marks in the Year 1844.	Proportion per Cent. of Men Signing the Marriage Register with Marks in 1844, above and below the Average of all England and Wales upon the like Number of Marriages.*
9.	10	11	12	13	14	15	16	17	18	19
£.										
10,902,359	+ 7.66	52631.81	44,875	-14.7	45.6	43.4	-2.2	4361.97	5,836	+33.8
5,186,904	+12.18	24030.48	23,407	- 2.5	43.5	41.3	-2.2	2003.32	2,552	+27.3
5,410,141	-27.70	38893.54	35,677	- 8.3	45.2	42.4	-2.8	3247.70	4,252	+30.9
27,192,242	- 8.87	155091.93	115,971	-25.2	38.2	37.3	-0.9	16464.41	18,918	+14.9
48,691,646	- 6.42	270647.76	219,930	-18.7	49.9	48.3	-1.6	26077.40	31,558	+21.0
9,752,506	- 5.42	53594.87	65,248	+21.7	29.8	28.9	-0.9	4737.05	4,227	-10.8
14,284,919	+22.64	60540.04	100,899	+66.6	13.6	13.6	..	6909.80	2,895	-58.1
6,558,085	+29.88	26243.98	21,895	-16.5	37.2	35.5	-1.7	2153.57	2,358	+ 9.5
6,516,079	- 3.08	34945.87	38,001	+ 8.7	21.9	20.0	-1.9	3034.18	1,874	-38.2
37,111,589	+10.02	175324.76	226,043	+28.9	22.7	21.9	-0.8	16834.60	11,354	-32.5
..	..	..	..	..	..	..	0.8	..	..	..
..	16.51	..	..	47.6	..	..	..	..	..	53.5
85,803,235	..	445972.52	445,973	..	33.6	32.4	-1.2	42912.00	42,912	..

and the north is seen to be precisely the same, or little more than 23 per 100 acres; and in the north midland agricultural counties, especially those to the east, it is scarcely more; but in the south midland and eastern agricultural counties it is about 40 per cent. denser; in the southern and maritime about 60 per cent. denser; in the south midland agricultural and manufacturing counties about 80 per cent. denser; in the northern and midland mining and manufacturing counties above 300 per cent. denser; and in the metropolitan counties above 1400 per cent. denser; all the excess above the average of 43 per 100 acres being in the two latter districts. By comparison with column 19, it will thus appear that the great central region, which, with the



*Summary Table; comparing the different Districts of England and Wales in and Ignorance, its Providence and*

Divisions.	Improvident Marriages.			Bastardy—1830.			Bastardy—
DISTRICTS.	Calculated Number of Marriages under 21 years of Age which would be found in the like Number of Marriages on the Average of all England and Wales in 1844.	Actual Number of Men Married under 21 Years of Age in 1844.	Proportion per Cent. of Marriages of Men under 21 years of Age above and below the Average on the like Number of Marriages in 1844 in all England and Wales.	Calculated Number of Baptisms which should have been of Illegitimate Children on the Average of the like Number of Baptisms in 1830 in England and Wales.	Number of Baptisms of Illegitimate Children Registered 1830, in the Parish Register, brought to account in the Enumeration Abstracts of 1 31.	Proportion per Cent. of the Baptisms Registered in 1830 which were of Illegitimate Children above and below the Average of all England and Wales upon the like number of Baptisms.	Calculated Number of Illegitimate Children to the Total Number of Registered Births on the Average of all England and Wales in 1842.
	20	21	22	23	24	25	26
<i>Least Instructed Districts:—</i>							
2. The South Midland and Eastern Agricultural Counties (exclusive of the Metropolitan) . . .	560.58	778	+ 38 8	2682.84	2,433	— 9.3	3917.66
5. The South Midland Agricultural and Manufacturing Counties .	256.61	398	+ 55 2	1140.95	918	— 19.5	1872.53
6. The Western (Celtic) Agricultural and Mining Counties .	417.37	302	— 27.6	130.958	1,861	+ 42.1	2953.70
8. The Northern and Midland Manufacturing and Mining Counties . . . . .	2125.94	2,741	+ 28.9	6840.37	7,968	+ 16.5	12966.09
Total of the Least Instructed Districts .	3360.50	4,219	+ 25.3	11973.74	13,180	+ 10.0	21709.98
<i>Most Instructed Districts:</i>							
1. The Southern Agricultural and Maritime Counties . . . . .	601.23	404	— 32.8	2584.28	2,110	— 18.3	3800.17
3. The Two Metropolitan Counties	888.02	333	— 62.5	2539.64	1,214	— 52.2	4576.30
4. The North Midland Agricultural Counties . . . . .	276.73	274	— 1.0	1301.65	1,494	+ 14.8	1955.07
7. The Northern Agricultural and Mining Counties . . . . .	389.92	285	— 26.9	1639.77	2,041	+ 24.5	2754.43
Total of the Most Instructed Districts .	2155.90	1,296	— 39.9	8065.34	6,859	— 14.9	13085.97
Balance in favour of the Least Instructed Districts . . . . .	..	..	..	..	..	..	..
Balance in favour of the Most Instructed Districts . . . . .	..	..	65.4	..	..	24.9	..
Grand Total of England Wales . . .	5515.40	5,515	..	20039.08	20,039	..	34795.95

exception of the metropolitan counties, has by far the densest population, is one with the least proportion of instruction; and that the aggregation of the people within narrower space is not necessarily accompanied by a greater relative amount of instruction, if their assembling be for mining and manufacturing occupations, but only when it occurs in the towns of residence and miscellaneous occupations; the districts which come below the average of ignorance being only the metropolis and the southern maritime counties, together with the northern agricultural and mining counties, which have the most dispersed population of all, and, next to London, are the most instructed.

On the other hand, it will appear by the next column (5), how-

respect to the Distribution of the Population, its Social Organization, its Education, Improvidence, and its Crime—continued.

1842.		Pauperism.			Savings.			Criminal Commitments.		
Actual Number of Illegitimate Children which are plainly detected in the Registry of Births for 1842 by the defective nature of the Entries.	Proportion per Cent. of Illegitimate Children above and below the Average of all England and Wales, in the Year 1842, upon the like Number of Registered Births.	Calculated Number of Paupers which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Paupers Relieved in each County during the Quarter ended Lady-day, 1844.	Proportion per Cent. of Paupers Relieved in the first Quarter of 1844 above and below the Average of all England and Wales upon the like Population.	Calculated Amount of Deposits in Savings' Banks 20th Nov. 1844, which should be found in Proportion to the Population of each County in 1841, on the Average of all England and Wales	Actual Amount of Deposits in Savings' Banks, 20th Nov. 1844, in each County.	Proportion per Cent. of Deposits in Savings' Banks, 20th Nov. 1844, above and below the Average on the like Population in England and Wales in 1841.	Calculated Annual Average of Commitments to Assizes and Quarter Sessions in all England and Wales in Three Years, 1842, 1843, and 1844, out of a Male Population of the like Number & Ages.	Actual Annual Commitments to Assizes and Quarter Sessions on the Average of the Three Years, 1842, 1843, and 1844, Males.	Proportion per Cent. of Commitments above and below the calculated Average for all England and Wales on the same Amount of Male Population of the like Ages.
27	28	29	30	31	32	33	34	35	36	37
					£.	£				
4,409	+ 12.6	164146.71	229,001	+ 39.5	3,014,853	2,783,056	— 7.6	2681.16	3021.90	+ 12.7
1,891	+ 0.9	81865.71	104,899	+ 28.1	1,376,516	1,156,379	— 15.9	1207.33	1546.67	+ 28.1
2,693	— 8.8	127441.47	120,417	— 5.5	2,227,903	1,219,105	— 45.2	2010.86	966.34	— 51.9
14,854	+ 14.6	408694.68	335,703	— 17.8	8,883,990	7,293,340	— 17.9	8233.27	9157.94	+ 11.2
23,847	+ 9.9	782148.57	790,020	+ 1.0	15,503,262	12,451,880	— 19.6	14132.62	14692.85	+ 4.0
3,375	— 11.2	150625.12	172,619	+ 14.6	3,070,027	4,067,140	+ 32.4	2702.28	2627.69	— 2.8
2,354	— 48.5	125482.21	109,749	— 12.5	3,467,859	5,396,524	+ 55.6	3219.55	3584.74	+ 11.3
2,154	+ 10.2	81409.49	79,459	— 3.6	1,503,309	1,647,155	+ 8.7	1381.62	1321.67	— 4.3
3,066	+ 11.3	110017.28	98,835	— 10.2	2,001,780	1,983,538	— 0.9	1843.93	1053.72	— 42.8
10,949	— 16.5	467534.10	459,662	— 1.7	10,042,975	13,094,357	+ 30.3	9147.38	8587.82	— 6.1
..	..	..	..	..	..	..	..	..	..	..
..	26.4	..	..	2.7	..	..	49.9	..	..	10.1
34,796	..	1249682.67	1249,682	..	25,546,237	25,546,237	..	23280.00	23280.67	..

ever, compared with column 19, that the districts which have the largest proportion of domestic servants to the whole population have the greatest amount of instruction, except where the class of peasant farmers still exists, in the poorest agricultural districts, with the apparent effect of causing to be included in the census, as domestic servants, a number who are properly productive labourers; for the high proportion found in the Celtic districts can scarcely otherwise be accounted for. The least proportion of all is seen to attach to the northern and central mining and manufacturing population, and the highest to that of the metropolitan counties; the two most populous regions being at the opposite ends of the scale.



The next two columns (6 and 7), compared with column 19, show that the districts in which either the agricultural or the manufacturing population is in excess, are the least instructed; and in combination with the evidence contained in the preceding column, appear plainly to indicate that it is the districts most "productive," whether agricultural or manufacturing, that are most backward, and those of most "residence," "expenditure," or "consumption," the most advanced in the scale of civilization. The greatest proportion of purely agricultural labourers is found of course in the south midland, eastern, and north midland agricultural counties; and the greatest proportion of manufacturing and trading population in the northern and midland mining and manufacturing counties, where it is about cent. per cent. greater than in any other region, except the metropolitan counties, and is in excess no less than 25 per cent. over what it appears to be even in them.

The conclusions now drawn may be subjected to a second test by a comparison of the next two sets of columns (8—13), with those which show the relative proportion of ignorance in each district (17—19). The excess of real property, it will be seen, is with the most instructed districts as a whole; but this results only from the predominating influence of the metropolitan counties. In every other instance of an excess in the proportion of real property, there is an excess also in the proportion of ignorance; and there are only two cases of an excess of ignorance without an excess of real property, viz., in the northern and midland mining and manufacturing districts, which have very little below the average; and the Celtic districts of the west, which have very much less than the average of real property, in proportion to the population.

The columns which contain the proportion of persons of independent means in the several districts, and those which exhibit the proportion of ignorance, show, however, no lack of comparatively gratifying coincidences; an excess in one being invariably accompanied by a deficiency in the other, though not always in equal proportion; dispersion appearing to add somewhat to the amount of absolute ignorance, though mere concentration nowhere turns the scale. The northern and midland mining and manufacturing districts, therefore, though they have by far the smallest proportion of persons of independent means, are not so deficient of instruction as the eastern and south midland agricultural counties, or those of Wales; but dispersion, on the other hand, has no triumphant effect in lowering the scale of instruction, or hindering its progress among the energetic population of the north, where there is more than the average proportion of persons of independent means. The deficiency, except in Wales, is nowhere so marked as to leave any doubt as to the existence everywhere of means for improving the education of the more backward districts; but only of the sufficiency of resident persons to appropriate them and see to their application.

At a rough glance it would appear that the decline in that feature of absolute ignorance, which is tested by the marriage registers, is proceeding in the most backward districts at twice the rate that it is in the more advanced; but it will be perceived that the proportions to be acted upon are nearly twice as great. The region making slowest progress, in proportion to its ignorance, is the great northern and mid-

land mining and manufacturing district—the great industrial heart of the empire—in comparison with which the contiguous northern agricultural counties are proceeding at quadruple the speed to the extinction of this reproach to their local records, and every other at double the speed, except the southern maritime counties which have only some 25 per cent. of advantage in this respect over the manufacturing, and the metropolitan, which are stationary.

The greater diffusion of instruction, it will be seen, prevails in the metropolis, and in the northernmost and southernmost counties of England respectively. Among the rest there is little distinction to be made, except to point out that although concentration appears relatively to do something for diminishing the proportion of absolute ignorance, yet, that the northern and midland mining and manufacturing counties are all relatively below the contiguous agricultural counties in the same latitudes, as well as greatly behind them in the rate of their progress to a better state of things. The difference between the several districts in the diffusion of the rudiments of education is seen to be remarkably great.

Having now arrived at some numerical indications of the relative power of important social and moral influences bearing upon the mass of the population, in these eight districts respectively, let us proceed to compare those which indicate the relative prevalence in each of certain good or evil courses of conduct; the indications of the latter being much the most numerous, because society and its records are compelled to take much the most notice of it. Heretofore the relative force of each set of circumstances has been compared with that of such others as it appeared to hold in immediate relationship, and likewise, invariably, with the proportion of instruction or of ignorance, appearing to prevail in connexion with it, in the assumption that, under the present circumstances of society, its moral progress, though not dependent merely on progress in the rudimentary arts of scholarship, will assuredly be accompanied by them. Hereafter it will be advisable, with equal caution, to seek in the other columns of the same table, not only for some relationship between the several moral features which they shadow forth, but also for the *effects* of instruction and its associate influences, upon each and all of them.

The metropolitan and the southern agricultural and maritime counties, which are two out of the three of highest instruction, are the only two in which improvident marriages, or those of men under twenty-one and illegitimacy, are both under the average. In every other, the deficiency of the one ill feature is just counterbalanced by the prevalence of the other, except in the case of the great central mining and manufacturing region, which has an unhappy excess of both. I have given the illegitimacy at two different periods, and from two distinct authorities, because they materially disagree in one particular; namely, the extent to which this unhappy feature of society prevails among the Celtic populations of the west; in which respect I incline to agree with the older authority, because of its greater claim to accuracy in regard to this one point. It is, I think, only the omission of a large number from this district which makes the south midland agricultural and manufacturing counties just above the average in the more recent



statement, though it will not account for all the relative increase of illegitimacy in the south midland and eastern agricultural counties.

In the pauperism columns, the balance is just against ignorance, but averages of this date show merely the usual state of things in a time of manufacturing prosperity, when every one in the manufacturing regions that can and will work is employed; and all wanting employment in the neighbouring agricultural districts are easily drafted off; while the more southern, distant, and purely agricultural regions are still oppressed by nearly their usual excess of people upon the rates, even in the case of those counties which have some little of manufactures intermingled with their agriculture; for they are of such a nature as inevitably to encourage a faster increase of hands than of trade to employ them.

With regard to providence, as tested by the accumulations in the Savings' Banks, it will be seen that the excess is variously coincident with the superiority of instruction, except in the case of the northern agricultural and mining districts, where the amount falls just below the average, in proportion to the population, perhaps unusually depressed by the great colliers' strike, which was at its most desperate shifts at the period of the returns. Notwithstanding the high wages of the mass of the population in the midland mining and manufacturing regions in all good times therefore, the rate of saving is as low as in the wretched districts of Bucks, Herts, and Bedfordshire. The lowest amount in Savings' Banks is in Wales. The circuit of deposit for each bank will sometimes overstep a county boundary, but averages of the present magnitude will not be much diverted from accuracy by such a circumstance; and indeed the county boundaries do not generally run near to the towns in which the banks are chiefly situated; but when we come to consider the subdivisions of these several districts, and especially the counties individually, cases of disturbance from these causes will be obvious.

The columns of committals for criminal offences agree very nearly with those of the early marriages; and after deducting the dispersed populations of the Celtic and the Scandinavian regions, both remarkably deficient in crime, the Welsh districts especially; and the southern agricultural and midland and north midland agricultural counties, which are also on the favourable side of the average, the excess of about 12 per cent. on the remainder of the population, is pretty nearly distributed throughout the rest of the kingdom, except where this proportion is more than doubled in the wretched south midland agricultural and manufacturing counties; the general result against which is throughout very marked.

These results as completely extinguish our belief in rural innocence, as those already recited undeceive us as to the comparative excess of rural ignorance. The metropolitan counties combined do not exhibit half the excess of criminal commitments that is witnessed in these neighbouring counties while Middlesex alone is even 4·9 per cent. under the average of all England, or 33 per cent. under the average of the counties last mentioned. A relative excess of ignorance, greater concentration of numbers, a low proportion of the leisured classes, and employment in dispersed manufactures, appear therefore to be the concomitants of the excess of crime everywhere but in the metropolitan counties, where its surprisingly small excess, though it may in some

degree be owing to the preventive character of its superior police, offers a high testimony in favour of the general conduct of its more instructed population.

If, now, we descend one step from these large results, and divide each of these great districts into two portions, according to the greater or less amount of, at least, rudimentary instruction, which prevails amongst its inhabitants, we shall find the general conclusions at which we have arrived corroborated by the results of this analysis wherever we apply it. And that the instruction test is the wand to employ for effecting this new combination must be obvious, if it be regarded as the best available indication, under the existing circumstances of society, of the relative degree of attention which the mass of the population has received from the more educated classes in each district, or of a superior energy of character and independence of circumstances hereditary in the inhabitants of a whole district. A faltering of the figures to declare in favour of the counties of most instruction occurs scarcely anywhere but among the northern and midland mining and manufacturing counties, forming District VIII. Here, the lowest proportion of crime is found in the counties which are most notorious for their largest amount of factory population, viz., Lancashire, the West Riding of Yorkshire, Derbyshire, and Nottinghamshire, while the most criminal are Cheshire, Staffordshire, Worcestershire, Gloucestershire, Warwickshire, and Leicestershire, on the whole more noted for dispersed and domestic manufactures. The first mentioned counties, however, are low in every other feature brought to account; and yet a greater diffusion of instruction is seen to be the concomitant of every promising figure.

The great superiority of the more over the less instructed portions of the same districts bears strong evidence to the generally good influence exercised by the schools represented by the several central societies, and supplying the chief portion of the instruction which makes the excess in the former; notwithstanding their patent imperfections on the one hand, and the greater proportion on the other, of persons in easy circumstances inhabiting the more instructed counties, and exercising beneficial influences by other agencies than the school; agencies which must have a share in the general result, and which must obviously exist to the greatest extent where there appears to be the greatest proportion of persons of independent means. That the progress of all these influences is very slow, and the unapproached mass of ignorance very great, is as plainly indicated by the very slow decrease in the proportion of persons signing the marriage registers with marks; a test beyond all serious dispute. When persons are married, they are required to sign the marriage register; if they cannot write their names, they sign with a mark, and the result has hitherto been that nearly one man in three, and one woman in two, that come to be married, sign with marks. "In 1844 only 67 in 100 men, and 51 in 100 women, wrote their names. It is probable that a few women, able perhaps to write letters intelligible to their friends, signed with marks; but this simple test leaves little doubt that 33 in 100 of the men, and 49 in 100 of the women of England, at the marriageable age, are either quite unable to write, or write very badly\*;" so badly, I would add,

\* Report of the Registrar-General, 1846, p. 15.



as to be sufficient evidence, in the generality of cases that they cannot "read their Bibles," in the sense of the well-known wish of George III.; while "many who write their names, are able to write little else, and writing the name is no proof of the possession of that stock of the elements of literary and scientific knowledge which it is desirable that the whole mass of a civilized nation should possess\*." The value of the figures is proved by the consistency of the results in the same districts in successive years; results which indicate in the aggregate a progress of only 1·2 per cent. among the men, and 1·1 per cent. among the women in  $4\frac{1}{2}$  years.

The capacity to write indicates a capacity to read, and, in most cases at least, an occasional habit of doing so; which, again, cannot have been acquired and retained without a length of time having been passed under influences comparatively of an improving character. In fact, I believe the possession of this capacity, or the absence of it, to mark the distinction between those who have and have not attended sufficiently at public day schools and at Sunday schools, to receive the small but yet important degree of education which the greater number of them can alone afford to their most constant attendants. Those who do not possess it, though some of them may "have been to school," as they will themselves say, have been in attendance but very irregularly, and to no appreciable purpose; which all acquainted with the circumstances and habits of the poor will testify to be a very frequent case. The numbers unable to write at the age of marriage, therefore, represent those who yet remain in a state of primitive ignorance, in so far as school instruction is concerned; and it is in the familiar experience of ministers of all denominations that these are, in most cases, very painfully alien, in mind if not always in person, from the ministrations of the gospel. So likewise, any marked excess in the amount of crime brought before the assizes and quarter sessions indicates, in the proportion of that excess, a more wide-spread imbecility of moral character, with its numberless rout of unrecorded evils, great and small, than prevails in other parts of the country; and a comparison of the several columns corroborates the conclusion which first suggests itself, that this imbecility prevails much in the proportion that the population are intellectually and socially alienated from the ministry of the gospel, and exposed to active temptation and mutual incitement, uncontrolled and uninformed by the presence, the solicitude, and the example of persons blessed with greater leisure and higher hopes.

Although, by means of a comparison of these data, we plainly detect, in even imperfect schooling, an obviously beneficial influence, yet the positive facts of our criminal calendars prove but too strongly that this influence is, in the most important respects, overcome by others, which the same data very strongly indicate. The five-fold increase of criminal commitments for the more serious offences in England and Wales during the present century, while the population has not doubled, is not seen to occur in greatest proportion in those parts of the country where the police has been most improved, and where the augmented number of commitments would admit of explanation by the increase of its vigilance, and the daily improved facilities which are

\* Report of the Registrar-General, 1846, p. 15.

offered to every unsettled individual to find his way to the wealthier centres of honest or dishonest enterprise, but in those which are the most remote, and where the police, during this period, has undergone the least alteration. A silent but extensive re-organization of a considerable part of society has taken place during the last half century in the development of its mechanical skill, and the elaboration of economical truths. This re-organization was made almost as early and as rapidly among the agricultural, as among the artisan population; the "manufacturing system," indeed, was introduced perhaps as early in the fields as in the towns, for it consists simply in an employment of mechanical agency, and of the subdivision of labour in the production of the commodities of life to a greater extent than had long been customary; a progress upon which we shall have every reason to congratulate ourselves, if we do not too long comparatively neglect every other element of progress. One effect of this re-organization has been to make changes equally great amongst the several classes in their relations of neighbourhood as well as of service. The small farmer and the little manufacturer are no longer types of their several professions. The workman is no longer an artisan companion of his employer, perhaps domiciliated with him, and expecting, if possessed of superior abilities, as well as industry and frugality, to succeed to the like position. He is no longer enjoying the bonds of neighbourhood with his master; he is now merely a labourer, an "operative." He is no longer a domestic, but a citizen. He is without friends more cultivated or better informed than himself, unless some pastoral or missionary light shall dawn upon his threshold, in however feeble rays; and yet he is ever sensible of the distant frown, as he conceives it, of the Board or the Bench. Uneasiness has naturally arisen out of such a state of things; but happily we have, I hope, too much of truth, humanity, justice, and practical good sense amongst us to refrain from seeking some great and effective remedy for this one-sidedness of progress; a remedy which shall bring the moral condition of society to fit agreement with its industrial organization.

This is very plainly seen where the workmen are in connexion with the property and near to the homes of their employers, in the efforts made by the more public-spirited proprietors and manufacturers, possessed of large means and Christian hearts. It is less observable where the producers are on a smaller scale, struggling between the old system and the new. It is wholly unobservable where the labourer is entirely unconnected with any mentionable amount of the capital, and removed from all neighbourhood to the home of his employer; as in the case of the great mass of the stockingers, hand-loom weavers, lace-makers, straw-plaiters, nail and lock-makers, and in some instances even miners, furnace-men, &c.; while a still lower tone of morals, manners, and dispositions, is found wherever the women and children are extensively employed in the trade of the place. But a term appears to be rapidly approaching to the thoughtlessness which accepts the wealth procured by the more economical organization of society, without attempting to secure its foundations anew, by more united efforts to fit the labourer to discharge the duties of good citizenship which are expected from him, unguided by superiors, in his present position.

Let it likewise be borne in mind that the rapid increase of our popu-



lation is not to any great extent in the rural districts, but chiefly in the masses employed in mining and manufacturing pursuits. Here, brought into close neighbourhood, and estranged from the influence of superior example, they are subject to temptations, hazards, and incitements far beyond those which approach the rural cottage; ignorant and largely depraved, they are likewise capable of combination; and combined, they form bodies little prepared to stoop to the exigencies of a reeling alternation of prosperity and adversity; to say nothing of all the evils which improvidence and heathenism pour out upon themselves. A large section of the population of such districts are incapable even of spending rationally the moderate remuneration which they generally obtain; if this remuneration be augmented by a peculiar demand for their energies, in lieu of employing them heartily, and husbanding the proceeds, they merely avail themselves of the opportunity to take a little more of present so-called enjoyment, in mere idleness and increased dissipation, to the positive disadvantage of their families; and when the demand for their labour slackens they are at once plunged into distress, and all of them would then willingly make ten times as much commodities as are wanted for the same bare subsistence, to which the worst of them always restrict their wives and children.

Indeed, I have often been struck with surprise that the capitalist and middle classes of these districts do not exert themselves more heartily—say, by the agency of the day-schools—for the moral elevation of the population around them, and of the whole country, if only for the pecuniary advantages which would accrue to the whole, if such a course were general. At present, making no savings, a large proportion of the workmen who are well paid in times of good trade, make no equalization of their expenditure over successive years; and when “bad times” come, have nothing to spend but in the purchase of food, if they do not receive it absolutely in charity from the Board of Guardians; and thus they throw each other out of work, in aggravation of the decrease of demand from other classes and other quarters; a mutual injury which involves also their masters, who must pay poor’s-rates without limit to keep them in being until the return of “better times.” The ordinary earnings of the large class to which I allude, if employed with the providence which is common among the inhabitants of neighbouring continental nations, would suffice to secure them from most of the miseries and degradation of “bad times,” to educate their children and to keep them in hopeful condition. How far the best-paid mining and manufacturing labourers of England are from the exercise of any such degree of forethought, all who know them are too painfully aware. And yet it would almost appear as though ignorance and degradation, like poverty and heathenism, must wear a garb picturesque and foreign, ere they can awaken our sympathies through the imagination, with sufficient power to stimulate us to exertion. Still there is surely some hope that a rational economy, if only in the parochial, county, and national expenditure upon pauperism and crime, will be directed in a more liberal outlay for popular education, to say nothing of the incalculable blessings which would accrue from the extension of Christian influences and Christian truth.

Comparison of the different Districts of England and Wales, with reference to Population, Real Property, Persons of Independent Means, Instruction, Ignorance, Improvidence, Crime, and Savings, abstracted from the larger Table annexed.

Divisions.	Inhabitants.	Real Property.	Realized Properties.	Progress of Instruction	Ignorance.	Improvident Marriages.	Bastardy.	Pauperism	Savings.	Criminal Commitments.
	Population in 1841.	Proportion per Cent. of Real Property Assessed to the Income Tax in 1843, above and below the Average to the like Population in England and Wales.	Proportion per Cent. of Persons of Independent Means in 1841, above and below the Average of all England and Wales, upon the like Population.	Excess or Deficiency per Cent. of the Men signing the Marriage Register with Marks in 1844, as compared with 1839-40, in each County.	Proportion per Cent. of the Men signing the Marriage Register with Marks in 1844, above and below the Average of all England and Wales, upon the like Number of Marriages.	Proportion per Cent. of Marriages under 21 Years of Age in 1844, above and below the Average of all England and Wales, upon the like Number of Marriages.	Proportion per Cent. of the Births Registered in 1842, which were of Illegitimate Children above and below the Average of all England and Wales upon the like Number of Registered Births.	Proportion of Paupers Relieved in 1844, above and below the Average of all England and Wales upon the like Population.	Proportion per Cent. of Deposits in Savings Banks 20th November, 1844, above and below the Average to the like Population in all England and Wales in 1841.	Proportion per Cent. of Commitments above and below the calculated Average for all England and Wales, on the same Amount of Male Population of the like Ages, in 1842, 3, 4.
DISTRICTS AND COUNTIES.										
Southern Agricultural and Maritime Counties.										
Counties of least Instruction—										
Sussex .....	299,753	+ 3.71	+ 6.1	— 3.	— 7.5	+ 3.7	+ 0.6	+43.0	— 7.7	— 3.4
Hants .....	355,004	— 2.87	+18.1	— 3.	—11.1	— 60.1	— 4.6	+22.2	+ 1.2	— 1.3
Dorset .....	175,043	—13.24	+13.9	+2.	+10.1	+ 26.1	— 0.2	+43.0	+56.6	—19.2
Total .....	829,800	— 4.93	+12.9	—2.1	— 5.9	— 12.0	— 1.1	+34.5	+ 9.6	— 6.0
Counties of most Instruction—										
Kent .....	548,337	— 1.69	+21.1	—1.	—17.1	— 40.9	—13.0	+ 1.1	+14.5	+21.4
Devonshire.....	533,460	—10.01	+36.0	+1.	—11.9	— 54.3	—24.2	+ 0.8	+86.4	—24.7
Total .....	1,081,797	— 5.79	+28.5	...	—14.3	— 47.9	—18.4	+ 0.9	+49.9	— 0.26
Balance on the side of least Instruction.	...	.86	...	2.1	{ Difference. 8.4 }	...	...	...	...	5.74*
Balance on the side of most Instruction	...	...	15.6	...		35.9	17.3	33.6	40.3	...
Southern Agricultural and Maritime Counties .....	1,911,597	— 5.42	+21.7	—0.9	—10.8	— 32.8	—11.2	+14.6	+32.4	— 2.8
South Midland and Eastern Agricultural Counties.										
Counties of least Instruction—										
Suffolk .....	315,073	+ 1.07	—15.1	—2.	+42.0	+ 17.3	+20.1	+36.2	—23.6	+12.3
Cambridge .....	164,459	+24.27	—17.0	—5.	+33.5	+103.8	+ 7.3	+27.5	—44.5	— 6.2
Norfolk .....	412,664	+ 4.55	—10.4	...	+38.1	+ 28.9	+47.2	+29.6	—14.8	+14.9
Essex .....	344,979	+ 4.02	—23.4	—4.	+42.4	+ 38.6	—21.2	+50.0	—13.5	+27.9
Huntingdon .....	58,549	+27.19	—29.5	—1.	+38.0	+115.1	—23.9	+ 8.9	—32.7	—30.4
Total .....	1,295,724	+ 7.09	—16.7	—2.5	+39.3	+ 42.7	+13.9	+36.4	—21.1	+13.3
Counties of most Instruction, being the South Midland Counties:—										
Wiltshire .....	258,733	+ 2.08	—17.3	—4.	+26.5	+ 73.4	+ 8.5	+67.7	+ 6.2	+11.6
Oxford .....	161,643	+17.60	—14.9	—3.	+ 5.0	+ 7.8	+11.4	+46.9	+20.9	+12.9
Berkshire .....	161,147	+11.30	+ 5.7	+2.	+28.6	— 3.3	+ 9.1	+19.0	+49.6	+ 9.6
Total .....	581,523	+ 8.94	—10.2	—2.	+21.0	+ 30.1	+ 9.5	+46.1	+22.3	+11.4
Balance on the side of least Instruction	...	...	...	.5	{ Difference. 18.3 }	...	...	9.7	...	...
Balance on the side of most Instruction	...	.85	6.5	...		12.6	4.4	...	43.4	1.9
South Midland and Eastern Counties .....	1,877,247	+ 7.66	—14.7	—2.2	+33.8	+ 38.8	+12.6	+39.5	— 7.6	+12.7
Metropolitan Counties (both of the highest rate of instruction):—										
Middlesex .....	1,576,636	+33.41	+72.6	...	—59.7	— 62.8	—48.8	—12.0	+81.8	— 4.9
Surrey .....	582,678	— 6.49	+50.1	+1.0	—53.2	— 61.6	—48.0	—13.3	—15.2	+57.3
Total .....	2,159,314	+22.64	+66.6	...	—58.1	— 62.5	—48.5	—12.5	+55.6	+11.3

\* Arising from one of the lowest districts of the Metropolis being included in Kent.



Divisions.	Inhabitants.	Real Property.	Realized Properties.	Progress of Instruction	Ignorance.	Improvident Marriages.	Bastardy.	Pauperism.	Savings.	Criminality.
<b>DISTRICTS AND COUNTIES—</b> <i>Continued.</i>	Population in 1841.	Proportion per Cent. of Real Property Assessed to the Income Tax in 1843, above and below the Average to the like Population in England and Wales.	Proportion per Cent. of Persons of Independent Means in 1841, above and below the Average of all England and Wales upon the like Population.	Excess or Deficiency per Cent. of the Men signing the Marriage Register with Marks in 1844, as compared with 1839-40, in each County.	Proportion per Cent. of the Men signing the Marriage Register with Marks in 1844, above and below the Average of all England and Wales, upon the like Number of Marriages.	Proportion per Cent. of Marriages under 21 Years of Age in 1844, above and below the Average of all England and Wales, upon the like Number of Marriages.	Proportion per Cent. of the Births Registered in 1842, which were of Illegitimate Children above and below the average of all England and Wales upon the like Number of Registered Births.	Proportion of Paupers Relieved in 1844, above and below the Average of all England and Wales, upon the like Population.	Proportion per Cent. of Deposits in Savings Banks 20th November, 1844, above and below the Average to the like Population in all England and Wales, in 1841.	Proportion per Cent. of Commitments above and below the Average of all England and Wales, in 1841.
<b>IV. North Midland and North Eastern Agricultural Counties.</b>										
<b>IV.A. Counties of least Instruction:—</b>										
Herefordshire .....	113,878	+31.10	+ 2.6	-3.	+11.2	- 45.9	+58.3	+ 1.5	+23.0	+
Shropshire .....	239,048	+14.41	-20.6	-4.	+24.6	- 46.7	+38.0	- 2.9	+60.3	+
Total .....	352,926	+19.79	-13.1	-3.3	+20.7	- 46.0	+43.9	- 1.2	+48.3	+
<b>IV.B. Counties of most Instruction:—</b>										
Lincolnshire .....	362,602	+56.87	-10.5	-2.	- 1.5	+ 3.9	- 6.5	-19.2	- 8.4	-
Northamptonshire .....	199,228	+16.51	-32.2	-1.	+15.6	+ 57.9	- 5.4	+20.1	-14.5	-
Rutland .....	21,302	+36.62	-30.3	-8.	-38.4	- 67.0	+ 0.8	+ 3.5	...	-
Total .....	583,132	+35.98	-18.6	-1.1	+ 3.7	+ 21.9	- 5.8	- 4.9	-13.9	-
Balance on the side of least Instruction	...	...	...	2.2	{ Difference. }	67.9	...	...	62.2	...
Balance on the side of most Instruction	...	16.19	5.5	...	17.0	...	49.17	3.7	...	...
Total North Midland and North Eastern Agricultural Counties ... }	936,058	+29.98	-16.5	-1.7	+ 9.5	- 1.0	+10.2	- 3.6	+ 8.7	-
<b>V. South Midland Agricultural Counties, with domestic Manufactures.</b>										
<b>V.A. Counties of least Instruction:—</b>										
Bedfordshire .....	107,936	-11.12	-43.1	-4.	+53.0	+147.8	+15.1	+26.9	-23.0	+
Buckinghamshire .....	155,983	- 1.60	-29.5	-4.	+30.2	+ 69.0	+ 8.8	+49.7	-43.0	+
Hertfordshire .....	157,207	+ 0.21	-16.1	-2.	+53.8	+112.5	+ 4.6	+17.5	-46.2	+
Total .....	421,126	- 3.36	-28.0	-3.6	+45.9	+109.5	+ 9.0	+30.5	-39.1	+
<b>V.B. County of most Instruction:—</b>										
Somersetshire .....	435,982	+27.21	+21.9	-1.	+10.6	+ 6.5	- 7.3	+25.8	+ 6.3	+
Total .....	435,982	+27.21	+21.9	-1.	+10.6	+ 6.5	- 7.3	+25.8	+ 6.3	+
Balance on the side of least Instruction	...	...	...	2.6	{ Difference. }	...	...	...	...	...
Balance on the side of most Instruction	...	30.57	49.9	...	35.3	103.0	16.3	4.7	45.4	...
Total South Midland Agricultural and Manufacturing Counties ... }	867,108	+12.18	- 2.5	-2.2	+27.3	+ 55.2	+ 0.9	+28.1	-15.9	+
<b>VI. Western (and chiefly Celtic) Agricultural and Mining Counties.</b>										
<b>VI.A. Counties of least Instruction:—</b>										
South Wales .....	515,283	-31.32	+ 4.9	-2.	+39.3	- 32.3	+ 3.4*	- 6.5	-65.3	-5
North Wales .....	396,320	-27.17	-20.7	-6.	+26.1	- 30.0	+12.3	+28.8	-50.7	-6
Monmouthshire .....	134,355	-18.44	-30.4	-3.	+53.3	- 38.8	-31.3*	-32.4	-56.7	-1
Total .....	1,045,958	-28.09	- 9.3	-3.7	+36.8	- 32.4	+ 1.1*	+ 2.3	-58.7	-5
<b>VI.B. County of most Instruction:—</b>										
Cornwall .....	341,279	-26.48	- 5.1	+0.6	+11.8	- 12.7	-36.7	-29.2	- 4.0	-5
Total .....	341,279	-26.48	- 5.1	+0.6	+11.8	- 12.7	-36.7	-29.2	- 4.0	-5
Balance on the side of least Instruction	...	...	...	4.3	{ Difference. }	- 19.7	...	...	...	...
Balance on the side of most Instruction	...	1.61	4.2	...	25.0	...	37.8*	31.5	62.7	...
Total Western (and chiefly Celtic) Agricultural and Mining Counties }	1,387,237	-27.70	- 8.3	-2.8	+30.9	- 27.6	- 8.8	- 5.5	-45.2	-5

\* For the reasons stated in the note on columns 26-8 of the Table in the Appendix, I am convinced that the bastardy in these districts is much less than it appears to be.

Divisions.	Inhabitants.	Real Property.	Realized Properties.	Progress of Instruction.	Ignorance.	Improvident Marriages.	Bastardy.	Pauperism.	Savings.	Criminal Commitments.
	Population in 1841.	Proportion per Cent. of Real Property Assessed to the Income Tax in 1843, above and below the Average to the like Population in England and Wales.	Proportion per Cent. of Persons of Independent Means in 1841, above and below the Average of all England and Wales, upon the like Population.	Excess or Deficiency per Cent. of the Men signing the Marriage Register with Marks in 1844, as compared with 1839-40 in each County.	Proportion per Cent. of the Men signing the Marriage Register with Marks in 1844, above and below the Average of all England and Wales upon the like Number of Marriages.	Proportion per Cent. of Marriages under 21 Years of Age in 1844, above and below the Average of all England and Wales, upon the like Number of Marriages.	Proportion per Cent. of the Births Registered in 1844, which were of Illegitimate Children above and below the Average of all England and Wales upon the like Number of Registered Births.	Proportion of Paupers Relieved in 1844, above and below the Average of all England and Wales upon the like Population.	Proportion per Cent. of Deposits in Savings Banks, 20th November, 1844, above and below the Average to the like Population in all England and Wales in 1841.	Proportion per Cent. of Commitments above and below the calculated Average for all England and Wales, on the same Amount of Male Population of the like Ages, in 1842, 3, 4.
DISTRICTS AND COUNTIES—										
Continued.										
II. Northern Agricultural and Mining Counties.										
A. Counties of least Instruction:—										
Westmoreland .....	56,454	+ 9.84	+43.7	—1.	—36.2	— 38.1	+37.8	+18.9	—70.9	—66.3
North Riding .....	204,122	—12.60*	+11.6	—1.	—31.4	— 43.2	+26.1	—10.6	+10.5	—23.4
Durham .....	324,284	— 4.58	— 9.4	—4.	—29.1	— 26.3	—15.9	—11.9	—59.6	—49.0
Total .....	584,860	— 6.02	+ 3.0	—2.7	—30.4	— 32.3	+ 2.6	— 8.4	—36.2	—41.8
B. Counties of most Instruction:—										
Cumberland .....	178,038	— 5.21	+32.1	...	—52.1	— 25.7	+70.3	—31.1	—23.2	—68.2
East Riding (with city and ainsty).....	233,257	+12.69*	+16.7	—1.	—37.1	— 31.9	+ 1.9	— 8.4	+83.6	—23.4
Northumberland .....	250,278	—14.25	— 2.0	—3.	—51.3	— 8.1	+ 1.2	— 1.0	+18.7	—46.3
Total .....	661,573	— 0.48	+13.8	—1.3	—45.1	— 22.2	+19.1	—11.8	+30.3	—43.8
Difference on the side of least Instruction	...	...	...	1.4	{ Difference. } 14.7	10.1	16.5	...	...	...
Difference on the side of most Instruction	...	5.54	10.8	...		...	...	3.4	66.5	2.0
III. Northern Agricultural and Mining Counties.										
A. Counties of least Instruction:—										
Cheshire.....	395,660	—11.45	—23.8	—4.	+ 0.4	+ 39.6	+40.3	—30.0	— 3.5	+34.5
Lancashire.....	1,667,054	—13.74	—28.9	+1.	+22.1	+ 7.8	+28.8	—14.5	—19.7	+10.1
West Riding .....	1,154,101	—12.69*	—33.4	—3.	+17.9	+ 67.8	+ 5.3	—19.6	—34.9	—23.4
Staffordshire .....	510,504	—11.33	—42.9	...	+31.3	+ 34.0	+10.2	—25.8	—36.5	+22.7
Worcestershire .....	233,336	+ 5.87	—20.0	...	+37.3	+17.2	— 7.3	—12.2	+12.9	+54.7
Total .....	3,960,655	—11.74	—31.0	—0.9	+21.5	+ 29.6	+18.1	—18.9	—22.7	+ 6.9
B. Counties of most Instruction:—										
Derbyshire .....	272,217	— 6.08	—31.9	—4.	—13.6	+ 9.5	+20.6	—44.4	—18.0	—32.7
Gloucestershire.....	431,383	—10.85	+32.3	—2.	—13.2	— 5.1	— 9.5	— 3.0	+25.4	+54.0
Warwickshire .....	401,715	+ 9.11	—20.3	—1.	+ 0.2	+ 0.1	—23.7	—23.9	—22.1	+39.0
Leicestershire .....	215,867	+18.00	—27.7	—2.	— 2.8	+110.5	+ 6.9	+18.1	—43.2	+40.3
Nottinghamshire .....	249,910	—15.26	—31.2	...	+ 1.9	+ 53.4	—46.8	—26.0	+12.8	—12.5
Total .....	1,571,092	— 1.63	—10.6	—1.8	— 5.6	+ 26.7	+ 4.1	—15.1	— 5.7	+22.5
Difference on the side of least Instruction	...	...	...	...	{ Difference. } 27.1	...	...	...	...	15.6
Difference on the side of most Instruction	...	10.11	20.4	.9		2.9	14.0	3.8	17.0	...
IV. Northern and Midland Mining and Manufacturing Counties.										
Yorkshire .....	5,531,747	— 8.87	—25.2	— .9	+14.9	+ 28.9	+14.6	—17.8	—17.9	+11.2

understated: the evidence of the marriage registers in 1830 showed South Wales then to stand + 157.5, North Wales + 23.5, and Monmouthshire + 65.2; making Wales and Monmouthshire together + 83.5, and the difference in favour of Cornwall 121.0 per cent., a proportion I believe still to approximate to the truth.

The real property and crime of the several ridings of Yorkshire appear to be the same, simply because the returns are made only for the county of that county without distinguishing the ridings, though each of them is equal to some of the whole counties.

It is very difficult to divide these counties into separate groups; but the greater crime going with the more southern, speaks favourably in respect for the factory districts, though the general result is very unfavourable to the manufacturing.



I have to acknowledge the use in this paper of the precise law of the correction required for the age of criminals so clearly and well established by Mr. Neison, in his paper on Criminal Statistics, read before this Section at its last meeting at Southampton. That paper arose, I apprehend, out of discussions in the Statistical Society of London, early in the same year, upon a paper which did not contain this correction, where it was absolutely requisite. The error, obvious to any one accustomed to investigate the laws of mortality, or to reduce observations made towards the improvement of any kindred branch of knowledge, was at once corrected by our colleague. The mathematical truth involved in this correction so warmly enlisted all the vigour of his powerful mind, however, as to absorb a considerable proportion of the discussion in a counter demonstration that there must be other antecedents and concomitants of criminal conduct than the mere arrival at a certain period of life, the influences of which must be eliminated before it could safely be asserted that "crime was a mere question of age," or, in other words, that a penchant for hanging and one for marrying, if not identical, were at all events pursuing a closely parallel course, and were therefore of kindred character. This course of the discussion I think prevented our doing justice to the much earlier labours in this field of Mr. Samuel Redgrave, of the Home Office, brought before the Statistical Society in 1836\*, and since continued in the Tables of Criminal Offenders annually laid before Parliament, and those of my former colleague, Mr. R. W. Rawson, who elaborated these returns, in comparison with the population of the whole country, and the criminal returns of other countries, in two important papers submitted, respectively, to this Section in 1839, and to the Statistical Society in 1840†. I may perhaps be permitted, therefore, as an act of justice to an old associate, and one still labouring for us and with us, although at the antipodes, to mention that his paper read before this Section in 1839 suggests the same corrections for the influences of age and sex which have been more recently established, with this only difference, that he had not the materials to produce the law with that accuracy to which it has now been brought.

"The following," he says, "is the proportion of offenders annually committed to the population at each interval of age, adding to the number under 16 one-fifth of the number between 16 and 20, and taking away, from that between 21 and 30, one-tenth, in order to equalize the periods of comparison:—

	No. of Offences annually committed on the average of the five years.	Proportion of Offences to the Population.
Under 17	2,539	or one offence in 2,432 individuals.
From 17 to 21	6,468	232
" 22 " 30	6,997	305
" 31 " 40	3,184	561
" 41 " 50	1,501	941
" 51 " 60	703	1,410
Above 60	319	3,391

\* Proceedings of the Statistical Society of London, p. 169.

† Quarterly Journal of the Statistical Society of London, October, 1839; and January, 1841.

“This table, it must be borne in mind, does not serve to show the positive frequency of crime, but merely its relative frequency at different ages; because it may be presumed that the ages of offenders not arrested or summarily convicted, do not materially differ from those of offenders committed for trial. There is, also, a circumstance which will in some degree disturb the above proportions. The number of persons employed abroad in the army and at sea will considerably diminish the proportion remaining at home, and liable to the commission of crime, between 18 and 35; therefore the tendency to crime between those ages will be even higher than that above shown, and a corresponding influence will be exerted upon the other periods of life.

“Comparing, however, the two sexes with each other, it is found that while the average relation is 82·8 males to 17·2 females, it is 2·7 per cent. greater among males under 12; 2·3 per cent. greater between 12 and 16, and 1·7 per cent. greater between 17 and 21. Between 22 and 30 it is within a small fraction of the average, but between 31 and 40 it is 2·4 per cent. in excess on the side of the females, and from 41 to 60, 5·9 per cent. Above 60 the excess diminishes to 2·9 per cent.

		Difference of the proportion of Males compared with the Average.			
		Males.	Females.	Excess.	Deficiency.
Under 12	.....	85·5	14·5	2·7	—
From 12 to 16	.....	85·1	14·9	2·3	—
„ 17 „ 21	.....	84·5	15·5	1·7	—
„ 22 „ 30	.....	83·0	17·0	·2	—
„ 31 „ 40	.....	80·4	19·6	—	2·4
„ 41 „ 50	.....	76·9	23·1	—	5·9
„ 51 „ 60	.....	77·0	23·0	—	5·8
Above 60	.....	79·9	20·1	—	2·9
Average .....		82·8	17·2		

All these endeavours are now, however, superseded by the accurate calculation of Mr. Neison.—

Ages.	Ratio per cent. of Criminals to the Population yearly.		Number of the Population to which there is one crime yearly.		Excess per cent. of Crime among Males.
	Males.	Females.	Males.	Females.	
Under 15	·0494	·0080	2024·7	12500·0	475·1
15—20	·6841	·1495	146·2	668·9	350·7
20—25	·7702	·1459	129·8	770·4	493·3
25—30	·5989	·1141	167·0	876·4	424·8
30—40	·3794	·0817	263·6	1224·0	364·3
40—50	·2504	·0643	399·4	1555·2	289·4
50—60	·1694	·0466	590·3	2145·9	265·2
60 and upwards.	·0813	·0186	1230·0	5373·5	336·8

This first correction shows us the relative degree in which each age and each sex succumb under evil influences, to such a course of conduct as brings them before the higher tribunals of their country, on some charge or other. It is a most important step to have made;



but it is such, far less for itself, than for the way which it opens to more refined observation, more detailed analyses, more careful comparisons, and more elaborate recombinations of their results. Unfortunately, its author's own first employment of it has not been very happy; for two different errors of process in its use infect with a considerable per centage of error every one of his conclusions; and I have therefore foregone with regret the use of some of his figures, in new combinations, which I had proposed to make, with due acknowledgments, in one of my columns. This slip of so able a mathematician does but make me more strongly of opinion that the vulgar habit of keeping our original facts clearly arranged under their right names is still essential to the profitable progress of statistics, and to their general trustworthiness in public estimation.

For instance, to resolve the number of commitments into one homogeneous element called *crime*, conceals from view the great assumption involved in our dealing as we do with these figures, which may and do mean very different things in different localities; and until an amount of time and labour shall have been spent in reducing the several classes of offenders, in dissimilar localities, into a proper form of comparison with each other, and the ages of the parties committed have been supplied, we can have only a general confidence in the present use of the figures, which necessarily assumes what is necessarily impossible, that the criminals in each separate locality have been guilty in the like proportions of the like offences. How many Londoners, for instance, will be committed for poaching, or Birminghamites for smuggling? And yet, in the present state of our materials, it is to some extent necessary to assume that temptation is everywhere equal, the law and the police everywhere the same, and the difference between the different districts the result merely of the varying degree of self-control possessed by the general population. This latter is, I believe, more nearly the case than would at the first glance be imagined; but it will require many laborious hours on materials yet uncollected to prove it exhaustively.

That process certainly is not exhaustive which compares only cases in which one or two elements are in great excess or extreme deficiency. Every various combination of all of them must be tested. Even when one element, wherever in excess, seems to be accompanied by the deficiency of another in a greater number of cases, this is no proof that the excess and deficiency are in the relationship of cause and effect. To prove even that two elements are invariably linked together requires that their concomitance shall be shown, under the deficiency, or comparative deficiency, of each and every other element; and any one may readily perform this operation for himself with the figures contained in the accompanying tables, to the discovery, I think, of more elements concomitant with a comparative deficiency of commitments for trial, than have been brought to view in the paper read at our last meeting at Southampton. And though a greater prevalence of rudimentary education may most commonly be accompanied by a comparatively small amount of crime, yet we shall not generally agree in the conclusion that an examination of any figures can "render manifest the powerful influence which even the simple qualification of individuals being able to affix their signatures, with or without

marks, has on the amount of crime in the various districts of the country."

I conceive, however, that the figures here adduced bear conclusive evidence to the fact of the immediate alliance of all the moral evils of which we can yet obtain statistical cognizance with *ignorance*; and that this ignorance is the denser and more wide spread wherever there is the least active intervention of persons blessed with means, education, and a missionary spirit, to make an aggressive movement upon the moral evils by which they are surrounded, and which it is part of the earthly trial of every Christian to combat with patient and affectionate labour, in addition to the part which he has to bear in whatever plan of co-operation for conveying the first rudiments of instruction may be instituted by the national councils. The dream of our indolent and fanciful humour that ignorance and innocence must still continue in the alliance celebrated in Arcadia, yet hangs about some of the most wealthy and least accessible portions of Society. It is no waste of time, therefore, to heap fact upon fact before parties who are influential even in their inactivity; for it is really a matter of serious doubt whether the sort of education to which many of them help their poorer neighbours in this misgiving spirit, be not of negative value. An important light upon this subject is derivable from a comparison of the progress of instruction among the persons found in our gaols, with the progress of instruction among the population at large. To this end a careful analysis has been made of the educational and other evidence contained in the tables of criminal offenders; adopting the same division into districts and the same subdivision of them, which has heretofore been employed.

I would first, however, beg to put on record the tables which bear evidence to the statements already advanced. They present the results of a careful comparison of the existing numerical evidence. It will not be difficult to raise doubts as to the value to be attached to them; and if these doubts be raised with the view of pursuing the investigation yet further by legitimate steps, the writer will be the first to join in their echo. But he cannot promise much sympathy with objections unaddressed to the cause of truth, or directed to discrediting the inductions drawn with the greatest care from the only existing evidence, merely to raise or keep up the credit of others obtained with less regard to correctness of fact or process, because they may happen to throw a more favourable light on a favourite hypothesis,—an abuse to which statistics are peculiarly liable, from the practical bearing of all their results being more readily perceived than their value as contributions towards yet higher truths is popularly appreciated. In this character, however, they resist all attempts to depose them from their position of nearest approximation to truth, until superseded by the really more advanced labours of abler and happier enquirers.



*Comparison of the different Districts of England and Wales, in respect to the  
Ignorance, its Providence and its Remedies.*

Divisions.	Inhabitants.	Distribution.		Features of Social Organization.			Real Property.
	Population in 1841.	Number of Inhabitants to 100 Statute Acres in 1841.	Proportion per Cent. of Inhabitants to 100 Acres above and below the Average of England and Wales.	Proportion per Cent. to whole Population of Domestic Servants in 1841.	Proportion per Cent. of whole Population engaged in		Calculated Value of Real Property which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.
					Agriculture, or as Graziers, Gardeners, &c.	Trade, Commerce, and Manufactures.	
DISTRICTS AND COUNTIES.							
Column 1.	2	3	4	5	6	7	8
<i>I. Southern Agricultural and Maritime Counties.</i>							£
<i>I. A. Counties of Least Instruction:—</i>							
Sussex .....	299,753	31.9	—25.8	7.5	11.9	9.7	1616910.5
Hants .....	355,004	34.1	—20.7	6.4	10.0	10.6	944206.97
Dorset .....	175,043	27.2	—36.7	5.4	10.9	11.1	1914942.3
Total—Least Instruction .....	829,800	32.5	—24.4	6.5	10.9	10.3	4476059.8
<i>I. B. Counties of Most Instruction:—</i>							
Kent .....	548,337	55.0	+27.9	6.6	8.7	10.2	2957808.19
Devonshire .....	533,460	32.2	—25.1	7.9	10.2	13.0	2877559.5
Total—Most Instruction .....	1,081,797	41.4	— 3.7	7.2	9.4	11.5	5835367.7
Total Southern Agricultural and Maritime Counties .....	1,911,597	37.0	—13.9	6.9	9.5	11.0	10311427.5
<i>II. South Midland and Eastern Agricultural Counties.</i>							
<i>II. A. Counties of Least Instruction, being the Eastern Counties;—</i>							
Suffolk .....	315,073	32.5	—24.4	5.6	13.9	10.0	1699548.8
Cambridge .....	164,459	28.1	—34.6	5.8	13.9	8.9	887115.3
Norfolk .....	412,664	31.9	—25.8	5.6	12.2	11.8	2225968.6
Essex .....	344,979	35.2	—18.1	5.9	14.8	9.3	1860866.0
Huntingdon .....	58,549	24.6	—42.8	6.0	14.5	9.2	315821.6
Total—Least Instruction .....	1,295,724	32.7	—23.9	5.7	13.6	10.2	6989320.5
<i>II. B. Counties of Most Instruction, being the South Midland Counties;—</i>							
Wiltshire .....	258,733	29.6	—31.1	5.1	14.1	10.8	1395642.8
Oxford .....	161,643	33.4	—22.3	5.9	12.9	10.7	871925.4
Berkshire .....	161,147	33.5	—22.1	7.2	13.2	10.2	869249.9
Total—Most Instruction .....	581,523	32.1	—25.3	5.9	13.6	10.6	3136818.2
Total—South Midland and Eastern Agricultural Counties .....	1,877,247	32.4	—24.6	5.8	13.6	10.4	10126138.7
<i>III. Metropolitan Counties; both in the highest scale of Instruction.</i>							
Middlesex .....	1,576,636	873.6	+1931.6	9.9	1.1	20.0	8504600.0
Surrey .....	582,678	120.0	+ 179.0	7.6	4.4	16.2	3143048.4
Total—Most Instruction .....	2,159,314	330.1	+ 667.7	9.3	2.0	18.9	11647648.4

*Distribution of the Population, its Social Organization, its Education and Improvidence, and its Crime.*

Property.		Realized Properties.			Progress of Instruction.			Ignorance.		
Actual Annual Value of Real Property assessed to the Property and Income Tax in each County, for the Year ending April, 1843.	Proportion per Cent. of Real Property in 1843, above and below the Average to the like Population throughout England and Wales.	Calculated Number of Persons of Independent Means which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Persons of Independent Means, according to Census of 1841.	Proportion per Cent. of Persons of Independent Means in 1841, above and below the Average of all England and Wales upon the like Population.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending 30th June, 1840.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending 31st Dec., 1844.	Excess or Deficiency per Cent. of the Men Signing the Marriage Register with Marks in 1844, as compared with 1839---40.	Calculated Number of Men Signing the Marriage Register with Marks which should have been found in 1844, on the Average of all England and Wales upon the like Number of Marriages.	Actual Number of Men Signing the Marriage Register with Marks in the Year 1844.	Proportion per Cent. of Men Signing the Marriage Register with Marks in 1844, above and below the Average of all England and Wales upon the like Number of Marriages.
9	10	11	12	13	14	15	16	17	18	19
£										
1,676,999	+ 3.27	8404.08	8,915	+ 6.1	33.	30.	-3.	681.40	630	- 7.5
917,077	- 2.87	9953.14	11,762	+ 18.1	32.	29.	-3.	959.16	852	- 11.1
1,661,447	- 13.24	4907.63	5,589	+ 13.9	34.	36.	+2.	382.23	421	+ 10.1
4,255,523	- 4.93	23264.85	26,266	+ 12.9	32.6	30.5	-2.1	2022.79	1,903	- 5.9
2,907,606	- 1.69	15373.56	18,629	+ 21.1	28.	27.	-1.	1287.53	1,067	- 17.1
2,589,377	- 10.01	14956.46	20,353	+ 36.0	28.	29.	+1.	1426.73	1,257	- 11.9
5,496,983	- 5.79	30330.02	38,982	+ 28.5	27.8	27.8	..	2714.26	2,324	- 14.3
9,752,506	- 5.42	53594.87	65,248	+ 21.7	29.8	28.9	-0.9	4737.05	4,227	- 10.8
1,717,825	+ 1.07	8833.61	7,499	- 15.1	48.	46.	-2.	762.85	1,083	+ 42.0
1,102,415	+ 24.27	4610.89	3,826	- 17.0	48.	43.	-5.	442.59	591	+ 33.5
2,327,371	+ 4.55	11569.73	10,358	- 10.4	45.	45.	..	989.99	1,367	+ 38.1
1,935,610	+ 4.02	9672.07	7,403	- 23.4	50.	46.	-4.	702.17	1,000	+ 42.4
401,684	+ 27.19	1641.52	1,157	- 29.5	46.	45.	-1.	135.63	187	+ 38.0
7,484,905	+ 7.09	36327.82	30,243	- 16.7	47.7	45.2	-2.5	3033.23	4,228	+ 39.3
1,424,558	+ 2.08	7254.02	5,996	- 17.3	45.	41.	-4.	527.93	668	+ 26.5
1,025,421	+ 17.60	4531.94	3,857	- 14.9	37.	34.	-3.	382.56	402	+ 5.0
967,475	+ 11.30	4518.03	4,779	+ 5.7	40.	42.	+2.	418.25	538	+ 28.6
3,417,454	+ 8.94	16303.99	14,632	- 10.2	41.2	39.2	-2.0	1328.74	1,608	+ 21.0
0,902,359	+ 7.66	52631.81	44,875	- 14.7	45.6	43.4	-2.2	4361.97	5,836	+ 33.8
1,345,851	+ 33.41	44203.67	76,369	+ 72.7	13.	13.	..	5215.04	2,102	- 59.7
2,939,068	- 6.49	16336.37	24,530	+ 50.1	16.	15.	-1.	1694.76	793	- 53.2
4,284,919	+ 22.64	60540.04	100,899	+ 66.6	13.6	13.6	..	6909.80	2,895	- 58.1



*Comparison of the different Districts of England and Wales, in respect to the  
Ignorance, its Providence and its Remedies.*

Divisions.	Improvident Marriages.			Bastardy---1830.			Bastardy---
DISTRICTS AND COUNTIES	Calculated Number of Marriages under 21 Years of Age which would be found in the like Number of Marriages on the Average of all England and Wales in 1844.	Actual Number of Men Married under 21 Years of Age in 1844.	Proportion per Cent. of Marriages of Men under 21 Years of Age above and below the Average on the like Number of Marriages in 1844 in all England and Wales.	Calculated Number of Baptisms which should have been of Illegitimate Children on the Average of the like Number of Baptisms in 1830 in England and Wales.	Number of Baptisms of Illegitimate Children Registered in 1830, in the Parish Registers brought to account in the Enumeration Abstracts of 1831	Proportion per Cent. of the Baptisms Registered in 1830 which were of Illegitimate Children above and below the Average of all England and Wales upon the like Number of Baptisms.	Calculated Number of Illegitimate Children to the Total Number of Registered Births on the Average of all England and Wales in 1842.
	20	21	22	23	24	25	26
<i>I. Southern Agricultural and Maritime Counties.</i>							
<i>I. A. Counties of Least Instruction;—</i>							
Sussex .....	80.01	83	+ 3.7	431.61	379	—12.2	611.3
Hants .....	123.27	77	—60.1	474.33	356	—24.9	695.1
Dorset .....	49.12	62	+ 26.1	234.06	205	—12.4	346.9
Total—Least Instruction .....	252.40	222	—12.0	1140.00	940	—17.5	1653.5
<i>I. B. Counties of Most Instruction;—</i>							
Kent .....	165.47	98	—40.9	744.39	582	—21.8	1108.7
Devonshire .....	183.36	84	—54.3	699.89	588	—16.0	1037.9
Total—Most Instruction .....	348.83	182	—47.9	1444.28	1,170	—19.0	2146.6
Total—Southern Agricultural and Maritime Counties .....	601.23	404	—32.8	2584.28	2,110	—18.3	3800.1
<i>II. South Midland and Eastern Agricultural Counties.</i>							
<i>II. A. Counties of Least Instruction, being the Eastern Counties;—</i>							
Suffolk .....	98.04	115	+ 17.3	434.81	408	— 6.2	669.3
Cambridge .....	56.88	115	+103.8	246.60	187	—24.1	401.8
Norfolk .....	127.23	164	+ 28.9	634.99	648	+ 2.0	824.7
Essex .....	90.24	125	+ 38.6	457.11	309	—32.4	677.3
Huntingdon .....	17.43	37	+115.1	84.05	75	+10.8	138.9
Total—Least Instruction .....	389.82	556	+ 42.7	1857.56	1,627	—12.4	2712.1
<i>II. B. Counties of Most Instruction, being the South Midland Counties;—</i>							
Wiltshire .....	67.85	117	+73.4	346.72	341	— 1.6	483.8
Oxford .....	49.16	53	+ 7.8	244.92	221	— 9.7	345.7
Berkshire .....	53.75	52	— 3.3	233.64	244	+ 4.4	375.8
Total—Most Instruction .....	170.76	222	—30.1	825.28	806	— 2.0	1205.5
Total—South Midland and Eastern Agricultural Counties .....	560.58	778	+ 38.8	2682.84	2,433	— 9.3	3917.6
<i>III. Metropolitan Counties, both in the highest scale of Instruction.</i>							
Middlesex .....	670.22	249	—62.8	1857.12	905	—51.3	3312.4
Surrey .....	217.80	84	—61.6	682.52	309	—56.6	1263.8
Total—Most Instruction .....	888.02	333	—62.5	2539.64	1,214	—52.2	4576.3

*Distribution of the Population, its Social Organization, its Education and Improvidence, and its Crime—continued.*

1842.		Pauperism.			Savings.			Criminal Commitments.		
Actual Number of Illegitimate Children which are plainly detected in the Registry of Births for 1842 by the defective nature of the entries	Proportion per Cent. of Illegitimate Children above and below the Average of all England and Wales, in the Year 1842, upon the like Number of Registered Births.	Calculated Number of Paupers which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Paupers Relieved in each County during the Quarter ended Lady-day, 1844.	Proportion per Cent. of Paupers Relieved in the first quarter of 1841 above and below the Average of all England and Wales upon the like Population.	Calculated Amount of Deposits in Savings' Banks, 20th Nov., 1844, which should be found in Proportion to the Population of each County in 1841, on the Average of all England and Wales.	Actual Amount of Deposits in Savings' Banks, 20th Nov., 1844, in each County.	Proportion per Cent. of Deposits in Savings' Banks, 20th Nov., 1844, above and below the Average on the like Population in England and Wales in 1841.	Calculated Annual Average of Commitments to Assizes and Quarter Sessions in all England and Wales in Three Years, in 1842, 1843, and 1844, out of a Male Population of the like Number & Ages.	Actual Annual Commitments to Assizes and Quarter Sessions on the Average of the Three Years, 1842, 1843, and 1844, Males.	Proportion per Cent. of Commitments above and below the calculated Average for all England and Wales on the same Amount of Male Population of the like Ages.
27	28	29	30	31	32	33	34	35	36	37
					£	£				
615	+ 0.6	20707.15	29,619	+ 43.0	481,404	444,086	— 7.7	419.76	405.67	— 3.4
663	— 4.6	24917.54	30,440	+ 22.2	570,137	577,185	+ 1.2	516.99	510.33	— 1.3
346	— 0.2	15558.14	22,248	+ 43.0	281,119	440,201	+ 56.6	233.16	183.33	— 19.2
1,624	— 1 1	61182.83	82,307	+ 34.5	1,332,660	1,461,472	+ 9.6	1169.91	1099.33	— 6.0
964	— 13.0	49570.95	50,113	+ 1.1	880,630	1,008,745	+ 14.5	808.04	981.36	+ 21.4
787	— 24.2	39871.34	40,199	+ 0.8	856,737	1,596,923	+ 86.4	724.33	547.00	— 24.7
1,751	— 18.4	89442.29	90,312	+ 0.9	1,737,367	2,605,668	+ 49.9	1532.37	1528.36	— .26
3,375	— 11.2	150625.12	172,619	+ 14.6	3,070,027	4,067,140	+ 32.4	2702.28	2627.69	— 2.8
804	+ 20.1	29167.31	40,740	+ 36.2	506,007	387,080	— 23.6	438.38	491.33	+ 12.3
431	+ 7.3	15926.25	20,305	+ 27.5	264,121	146,420	— 44.5	243.09	228.00	— 6.2
1,214	+ 47.2	31813.70	41,255	+ 29.6	662,739	564,395	— 14.8	568.10	660.33	+ 16.2
534	— 21.2	29732.26	44,599	+ 50.0	554,037	479,261	— 13.5	501.83	642.23	+ 27.9
106	— 23.9	5150.20	5,609	+ 8.9	94,030	63,234	— 32.7	85.78	59.67	— 30.4
3,089	+ 13.9	111789.82	152,508	+ 36.4	2,080,934	1,640,390	— 21.1	1837.18	2081.56	+ 13.3
525	+ 8.5	21616.40	36,250	+ 67.7	415,525	441,532	+ 6.2	372.93	416.34	+ 11.6
385	+ 11.4	13097.96	19,245	+ 46.9	259,592	313,906	+ 20.9	235.69	266.00	+ 12.9
410	+ 9.1	17642.53	20,998	+ 19.0	258,802	387,228	+ 49.6	235.36	258.00	+ 9.6
1,320	+ 9.5	52356.89	76,493	+ 46.1	933,919	1,142,666	+ 22.3	843.98	940.34	+ 11.4
4,409	+ 12.6	164146.71	229,001	+ 39.5	3,014,853	2,783,056	— 7.6	2681.16	3021.90	+ 12.7
1,697	— 48.8	77978.13	68,579	— 12.0	2,532,078	1,603,513	+ 18.8	2379.33	2263.44	— 4.9
657	— 48.0	47504.08	41,170	— 13.3	935,781	793,011	— 15.2	840.22	1321.30	+ 57.3
2,354	— 48.5	125482.21	109,749	— 12.5	3,467,859	5,396,524	+ 55.6	3219.55	3584.74	+ 11.3



*Comparison of the different Districts of England and Wales, in respect to the Ignorance, its Providence and*

Divisions.	Inhabitants.	Distribution.		Features of Social Organization.			Real
	Population in 1841.	Number of Inhabitants to 100 Statute Acres in 1841.	Proportion per Cent. of Inhabitants to 100 Acres above and below the Average of England and Wales.	Proportion per Cent. to whole Population of Domestic Servants in 1841.	Proportion per Cent. to whole Population engaged in		Calculated Value of Real Property which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.
					Agriculture, or as Graziers, Gardeners, &c.	Trade, Commerce, and Manufactures.	
DISTRICTS AND COUNTIES.							
Column 1.	2	3	4	5	6	7	8
IV. North Midland and North Eastern Agricultural Counties.							£
IV. A. Counties of Least Instruction, being the North Midland Counties:—							
Hereford .....	113,878	20.6	—52.1	9.8	14.6	9.9	614274.21
Shropshire .....	239,048	27.8	—35.3	7.3	11.7	11.9	1289459.09
Total—Least Instruction .....	352,926	25.0	—41.8	8.1	12.6	11.2	1903733.30
IV. B. Counties of Most Instruction, being the North Eastern Counties:—							
Lincolnshire .....	362,602	21.7	—49.5	7.3	15.9	9.6	1955927.04
Northamptonshire .....	199,228	30.6	—28.8	5.3	12.9	13.5	1074664.32
Rutlandshire .....	21,302	22.3	—48.1	6.7	15.6	9.2	114906.03
Total—Most Instruction .....	583,132	24.2	—43.7	6.6	14.8	10.9	3145497.39
Total—North Midland and North Eastern Agricultural Counties .....	936,058	24.5	—43.0	7.1	14.0	11.0	5049230.69
V. South Midland Agricultural Counties, with Domestic Manufactures.							
V. A. Counties of Least Instruction:—							
Bedfordshire .....	107,936	36.4	—15.3	4.4	13.8	13.3	582222.21
Buckinghamshire .....	155,983	33.0	—23.2	5.6	14.0	12.6	841394.60
Hertfordshire .....	157,207	39.0	—9.3	6.5	12.8	12.8	847997.03
Total—Least Instruction .....	421,126	36.2	—15.8	5.6	13.5	12.9	2271613.84
V. B. Counties of Most Instruction:—							
Somersetshire .....	435,982	41.4	—3.7	6.6	10.2	12.9	2351749.25
Total—Most Instruction .....	435,982	41.4	—3.7	6.6	10.2	12.9	2351749.25
Total—South Midland Agricultural Counties, with Domestic Manufactures	857,108	39.1	—9.1	6.1	11.8	12.9	4623363.09
VI. Western (and chiefly Celtic) Agricultural and Mining Counties.							
VI. A. Counties of Least Instruction:—							
South Wales .....	515,283	19.0	—55.8	6.9	10.3	10.5	2779510.18
North Wales .....	396,320	19.4	—54.9		12.7	9.0	2137806.75
Monmouthshire .....	134,355	42.3	—1.6		6.5	13.1	724730.08
Total—Least Instruction .....	1,045,958	20.6	—52.1	6.7	10.7	10.3	5642047.01

*Distribution of the Population, its Social Organization, its Education and Improvidence, and its Crime—continued.*

Property.		Realized Properties.			Progress of Instruction.			Ignorance.		
Actual Annual Value of Real Property assessed to the Property and Income Tax in each County, for the Year ending April, 1843.	Proportion per Cent. of Real Property in 1843, above and below the Average to the like Population throughout England and Wales.	Calculated Number of Persons of Independent Means which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Persons of Independent Means according to Census of 1841.	Proportion per Cent. of Persons of Independent Means in 1841, above and below the Average of all England and Wales upon the like Population.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending 30th June, 1840.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending the 31st Dec., 1844.	Excess or Deficiency per Cent. of the Men Signing the Marriage Register with Marks in 1844, as compared with 1839—40.	Calculated Number of Men Signing the Marriage Register with Marks which should have been found in 1844, on the Average of all England and Wales upon the like Number of Marriage.	Actual Number of Men Signing the Marriage Register with Marks in the Year 1844.	Proportion per Cent. of Men Signing the Marriage Register with Marks in 1844, above and below the Average of all England and Wales upon the like Number of Marriages.
9	10	11	12	13	14	15	16	17	18	19
£										
805,319	+ 31.10	3192.76	3,276	+ 2.6	39.	36.	—3.	209.61	233	+ 11.2
1,475,339	+ 14.41	6702.12	5,316	—20.7	44.	40.	—4.	520.14	648	+ 24.6
2,280,658	+ 19.79	9894.88	8,592	—13.1	42.4	39.1	—3.3	729.75	881	+ 20.7
2,868,339	+ 56.87	10166.16	9,099	—10.5	34.	32.	—2.	838.78	826	— 1.5
1,252,100	+ 16.51	5585.70	3,788	—32.2	37.	38.	+ 1.	537.99	622	+ 15.6
156,988	+ 36.62	597.24	416	—30.3	28.	20.	—8.	47.05	29	—38.4
4,277,427	+ 35.98	16349.10	13,303	—18.6	34.7	33.6	—1.1	1423.82	1,477	+ 3.7
6,558,085	+ 29.88	26243.98	21,895	—16.5	37.2	35.5	—1.7	2153.57	2,358	+ 9.5
517,474	—11.12	3026.17	1,720	—43.1	54.	50.	—4.	322.85	494	+ 53.0
827,890	— 1.60	4373.25	3,084	—29.5	46.	42.	—4.	304.03	396	+ 30.2
849,794	+ 0.21	4407.56	3,696	—16.1	52.	50.	—2.	324.80	499	+ 53.8
2,195,158	— 3.36	11806.98	8,500	—28.0	50.9	47.3	—3.6	951.68	1,389	+ 45.9
2,991,746	+ 27.21	12223.50	14,907	+ 21.9	37.	36.	—1.	1051.64	1,163	+ 10.6
2,991,746	+ 27.21	12223.50	14,907	+ 21.9	37.	36.	—1.	1051.64	1,163	+ 10.6
5,186,904	+ 12.18	24030.48	23,407	— 2.5	43.5	41.3	—2.2	2003.32	2,552	+ 27.3
1,908,780	—31.32	14446.83	15,163	+ 4.9	47.	45.	—2.	1296.94	1,806	+ 39.3
1,556,938	—27.17	11111.50	8,815	—20.7	47.	41.	—6.	831.31	1,048	+ 26.1
591,162	—18.44	3766.87	2,622	—30.4	53.	50.	—3.	353.68	542	+ 53.3
4,056,880	—28.09	29325.20	26,600	— 9.3	48.1	44.4	—3.7	2481.93	3,396	+ 36.8



*Comparison of the different Districts of England and Wales, in respect to the Ignorance, its Providence and*

Divisions.	Improvident Marriages.			Bastardy—1830.			Bastardy—
	Calculated Number of Marriages under 21 Years of Age which would be found in the like Number of Marriages on the Average of all England and Wales in 1844.	Actual Number of Men Married under 21 Years of Age in 1844.	Proportion, per Cent. of Marriages of Men under 21 Years of Age above and below the Average on the like Number of Marriages in 1844 in all England and Wales.	Calculated Number of Baptisms which should have been of Illegitimate Children on the Average of the like Number of Baptisms in 1830 in England and Wales.	Number of Baptisms of Illegitimate Children, Registered in 1830, in the Parish Registers, brought to account in the Enumeration Abstracts of 1831.	Proportion per Cent. of the Baptisms Registered in 1830 which were of Illegitimate Children above and below the Average of all England and Wales upon the like Number of Baptisms.	
DISTRICTS AND COUNTIES	20	21	22	23	24	25	26
IV. <i>North Midland and North Eastern Agricultural Counties.</i>							
IV. A. Counties of Least Instruction, being the North Midland Counties:—							
Hereford .....	26.93	15	— 45.9	152.32	234	+ 53.6	184.42
Shropshire .....	66.84	36	— 46.7	332.29	495	+ 48.9	444.98
Total—Least Instruction .....	93.77	51	— 46.0	484.61	729	+ 50.4	629.40
IV. B. Counties of Most Instruction, being the North Eastern Counties:—							
Lincolnshire .....	107.78	112	+ 3.9	533.51	538	+ 0.8	808.51
Northamptonshire .....	69.14	109	+ 57.9	253.63	201	— 20.7	467.56
Rutlandshire .....	6.04	2	— 67.3	29.90	26	— 13.1	49.60
Total—Most Instruction .....	182.96	223	+ 21.9	817.04	765	— 6.3	1325.67
Total—North Midland and North Eastern Agricultural Counties .....	276.73	274	— 1.0	1301.65	1,494	+ 14.8	1955.07
V. <i>South Midland Agricultural Counties, with Domestic Manufactures.</i>							
V. A. Counties of Least Instruction:—							
Bedfordshire .....	41.41	102	+ 147.8	139.15	91	— 34.6	274.61
Buckinghamshire .....	39.07	66	+ 69.0	209.30	182	— 13.0	315.40
Hertfordshire .....	40.98	86	+ 112.5	207.41	142	— 31.5	361.31
Total—Least Instruction .....	121.46	254	+ 109.5	555.86	415	— 25.4	951.32
V. B. Counties of Most Instruction:—							
Somersetshire .....	135.15	144	+ 6.5	585.09	503	— 14.0	921.21
Total—Most Instruction .....	135.15	144	+ 6.5	585.09	503	— 14.0	921.21
Total—South Midland Agricultural Counties, with Domestic Manufactures,	256.61	398	+ 55.2	1140.95	918	— 19.5	1872.53
VI. <i>Western (and chiefly Celtic) Agricultural and Mining Counties.</i>							
VI. A. Counties of Least Instruction:—							
South Wales .....	166.68	113	— 32.3	368.12	948	+ 157.5	1131.51
North Wales .....	106.83	75	— 30.0	407.37	491	+ 20.5	718.65
Monmouthshire .....	45.45	28	— 38.8	85.84	142	+ 65.2	329.99
Total—Least Instruction .....	318.96	216	— 32.4	861.33	1,581	+ 83.5	2180.15

*Distribution of the Population, its Social Organization, its Education and Improvidence, and its Crime—continued.*

1842.		Pauperism.			Savings.			Criminal Commitments.		
Actual Number of Illegitimate Children which are plainly detected in the Registry of Births for 1842 by the defective nature of the entries.	Proportion per Cent. of Illegitimate Children above and below the Average of all England and Wales, in the Year 1842, upon the like Number of Registered Births.	Calculated Number of Paupers which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Paupers Relieved in each County during the Quarter ended Lady-day, 1844.	Proportion per Cent. of Paupers Relieved in the first Quarter of 1844 above and below the Average of all England and Wales upon the like Population.	Calculated Amount of Deposits in Savings' Banks 20th Nov., 1844, which should be found in Proportion to the Population of each County in 1841, on the Average of all England and Wales.	Actual Amount of Deposits in Savings' Banks, 20th Nov., 1844, in each County.	Proportion per Cent. of Deposits in Savings' Banks, 20th Nov., 1844, above and below the Average on the like Population in England and Wales in 1841.	Calculated Annual Average of Commitments to Assizes and Quarter Sessions in all England and Wales in Three Years, 1842, 1843, and 1844, out of a Male Population of the like Number and Ages.	Actual Annual Commitments to Assizes and Quarter Sessions on the Average of the Three Years, 1842, 1843, and 1844, Males.	Proportion per Cent. of Commitments above and below the calculated Average of all England and Wales on the same Amount of Male Population of the like Ages.
27	28	29	30	31	32	33	34	35	36	37
					£	£				
292	+ 58.3	10256.96	10,419	+ 1.5	182,888	225,062	+ 23.0	165.44	197.33	+ 19.3
614	+ 38.0	17706.01	17,204	+ 2.9	383,911	615,601	+ 60.3	353.62	398.67	+ 12.7
906	+ 43.9	27962.97	27,623	— 1.2	566,799	840,663	+ 48.3	519.06	596.00	+ 14.8
756	— 6.5	33024.96	26,663	— 19.2	582,339	532,951	— 8.4	539.38	433.67	— 19.6
442	— 5.4	18275.51	21,951	+ 20.1	319,960	273,541	— 14.5	292.43	260.67	— 10.9
50	+ 0.8	2146.05	2,222	+ 3.5	34,211	..	..	30.75	31.33	+ 1.9
1,248	— 5.8	53446.52	50,836	— 4.9	936,510	806,492	— 13.9	862.56	725.67	— 15.9
2,154	+ 10.2	81409.49	78,459	— 3.6	1,503,309	1,647,155	+ 8.7	1381.62	1321.67	— 4.3
316	+ 15.1	10414.88	13,218	+ 26.9	173,345	133,388	— 23.0	150.46	182.67	+ 21.4
343	+ 8.8	13007.32	19,479	+ 49.7	250,509	142,609	— 43.0	219.22	263.00	+ 20.0
378	+ 4.6	16327.08	19,192	+ 17.5	252,475	135,772	— 46.2	226.18	258.33	+ 14.2
1,037	+ 9.0	39749.28	51,889	+ 30.5	676,329	411,769	— 39.1	595.86	704.00	+ 18.2
854	— 7.3	42116.43	53,010	+ 25.8	700,187	744,610	+ 6.3	611.47	842.67	+ 37.6
854	— 7.3	42116.43	53,010	+ 25.8	700,187	744,610	+ 6.3	611.47	842.67	+ 37.6
1,891	+ 0.9	81865.71	104,899	+ 28.1	1,376,516	1,156,379	— 15.9	1207.33	1546.67	+ 28.1
1,170	+ 3.4	47922.70	44,782	— 6.5	827,545	286,451	— 65.3	747.73	331.00	— 55.7
807	+ 12.3	34019.29	43,860	+ 28.8	636,490	313,345	— 50.7	566.49	219.67	— 61.2
227	— 31.3	13922.03	9,414	— 32.4	215,774	93,387	— 56.7	228.82	201.00	— 12.1
2,204	+ 1.1	95864.02	98,056	+ 2.3	1,679,809	693,183	— 58.7	1543.04	751.67	— 51.3



*Comparison of the different Districts of England and Wales, in respect to the Ignorance, its Providence and*

Divisions.	Inhabitants.	Distribution.		Features of Social Organization.			Real
		Population in 1841.	Number of Inhabitants to 100 Statute Acres in 1841.	Proportion per Cent. of Inhabitants to 100 Acres above and below the Average of England and Wales.	Proportion per Cent. to whole Population of Domestic Servants in 1841.	Proportion per Cent. of whole Population engaged in Agriculture, or as Graziers, Gardeners, &c. Trade, Commerce, and Manufactures.	
DISTRICTS AND COUNTIES.							Calculated Value of Real Property which should be found in Proportion to the Population in 1841, on the Average of all England, and Wales.
Column 1.	2	3	4	5	6	7	8
VI. <i>Western (and chiefly Celtic) Agricultural and Mining Counties—contd.</i>							£
VI. B. Counties of Most Instruction:— Cornwall .....	341,279	39.8	— 7.4	5.9	7.9	9.3	1840907.72
Total—Most Instruction .....	341,279	39.8	— 7.4	5.9	7.9	9.3	1840907.72
Total—Western Agricultural and Mining Counties .....	1,387,237	23.3	—22.5	6.5	10.0	10.0	7482954.73
VII. <i>Northern Agricultural and Mining Counties.</i>							
VII. A. Counties of Least Instruction:— Westmorland .....	56,454	11.6	—73.0	7.6	11.6	13.8	304520.94
North Riding .....	204,122	15.5	—63.9	6.7	13.8	11.6	1101063.26
Durham .....	324,284	46.2	+ 7.4	4.7	4.4	13.9	1749234.26
Total—Least Instruction .....	584,860	23.8	—44.6	5.6	8.4	13.1	3154818.46
VII. B. Counties of Most Instruction:— Cumberland .....	178,038	18.3	—57.4	6.6	8.8	14.6	960362.43
East Riding (with City and Ainsty) .....	233,257	30.5	—29.1	7.0	11.0	13.8	1258221.61
Northumberland .....	250,278	20.9	—51.4	5.6	6.9	14.9	1350035.32
Total—Most Instruction .....	661,573	22.8	—47.0	6.3	8.8	14.4	3568619.36
Total—Northern Agricultural and Mining Counties .....	1,246,433	23.2	—46.0	6.0	8.6	13.8	6723437.82
VIII. <i>Northern and Midland Mining and Manufacturing Counties.</i>							
VIII. A. Counties of Least Instruction:— Cheshire .....	395,660	58.8	+ 36.7	6.1	6.7	23.5	2134246.61
Lancashire .....	1,667,054	147.5	+ 243.0	4.4	3.0	28.1	8992327.66
West Riding .....	1,154,101	70.0	+ 62.8	3.7	4.3	24.6	6225385.83
Staffordshire .....	510,504	67.4	+ 56.7	4.6	5.7	18.7	2753731.57
Worcestershire .....	233,336	50.4	+ 17.2	4.7	10.1	16.7	1258647.75
Total—Least Instruction .....	3,960,655	86.4	+100.9	4.4	4.5	24.7	21364339.42
VIII. B. Counties of Most Instruction:— Derbyshire .....	272,217	41.4	— 3.7	5.6	7.1	18.9	1468377.42
Gloucestershire .....	431,383	53.6	+ 24.6	7.2	7.2	15.1	2326941.58
Warwickshire .....	401,715	70.0	+ 62.8	5.9	6.0	21.9	2166908.15
Leicestershire .....	215,867	41.9	— 2.6	6.1	7.9	19.2	1164417.46
Nottinghamshire .....	249,910	46.7	+ 8.6	5.3	8.2	20.6	1348050.27
Total—Most Instruction .....	1,571,092	51.3	+19.3	6.2	7.1	18.9	8474694.88
Total—North Midland Mining and Manufacturing Counties .....	5,531,747	72.3	+68.1	4.9	5.2	23.1	29839034.30

*Distribution of the Population, its Social Organization, its Education and Improvidence, and its Crime—continued.*

Property.		Realized Properties.			Progress of Instruction.			Ignorance.		
Actual Annual Value of Real Property assessed to the Property and Income Tax in each County, for the Year ending April, 1843.	Proportion per Cent. of Real Property in 1843, above and below the Average to the like Population throughout England and Wales.	Calculated Number of Persons of Independent Means which should be found in Proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Persons of Independent Means according to Census of 1841.	Proportion per Cent. of Persons of Independent Means in 1841, above and below the Average of all England and Wales upon the like Population.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending 30th June, 1840.	Proportion per Cent. of the Men Married who Signed the Marriage Register with Marks in the Year ending 31st Dec., 1844.	Excess of Deficiency per Cent. of the Men Signing the Marriage Register with Marks in 1844 as compared with 1839—40.	Calculated Number of Men Signing the Marriage Register with Marks which should have been found in 1844, on the Average of all England and Wales upon the like Number of Marriages.	Actual Number of Men Signing the Marriage Register with Marks in the Year 1844.	Proportion per Cent. of Men Signing the Marriage Register with Marks in 1844, above and below the Average of all England and Wales upon the like Number of Marriages.
9	10	11	12	13	14	15	16	17	18	19
£										
1,353,261	—26.48	9568.34	9,077	— 5.1	35.7	36.3	+0.6	765.77	856	+11.8
1,353,261	—26.48	9568.34	9,077	— 5.1	35.7	36.3	+0.6	765.77	856	+11.8
5,410,141	—27.70	38893.54	35,677	— 8.3	45.2	42.4	—2.8	3247.70	4,252	+30.9
334,501	+ 9.84	1582.78	2,275	+43.7	22.	21.	—1.	125.24	80	—36.2
961,307	—12.69	5722.91	6,389	+11.6	23.	22.	—1.	437.39	300	—31.4
1,668,986	— 4.58	9091.85	8,231	— 9.4	27.	23.	—4.	863.11	612	—29.1
2,964,794	— 6.02	16397.54	16,895	+ 3.0	25.2	22.5	—2.7	1425.74	992	—30.4
910,334	— 5.21	4991.60	6,597	+32.1	16.	16.	..	323.18	155	—52.1
1,098,517	—12.69	6539.76	7,634	+16.7	21.	20.	—1.	708.66	446	—37.1
1,542,434	+14.25	7016.97	6,875	— 2.0	19.	16.	—3.	576.60	281	—51.3
3,551,285	— 0.48	18548.33	21,106	+13.8	19.1	17.8	—1.3	1608.44	882	—45.1
6,516,079	— 3.08	34945.87	38,001	+ 8.7	21.9	20.0	—1.9	3034.18	1,874	—38.2
1,889,937	—11.45	11093.00	8,444	—23.8	37.	33.	—4	854.68	858	+ 0.4
7,756,228	—13.74	46738.69	33,207	—28.9	39.	40.	+1.	5995.09	7,326	+22.1
5,435,205	—12.69	32357.18	21,550	—33.4	41.	38.	—3.	3404.76	4,014	+17.9
2,441,553	—11.33	14312.85	8,173	—42.9	43	43.	..	1249.57	16,41	+31.3
1,332,538	+ 5.87	6541.97	5,231	—20.0	45.	45.	..	925.74	1,271	+37.3
18,855,461	—11.74	111043.69	76,605	— 10	40.3	39.4	—0.9	12429.84	15,110	+21.5
1,379,025	— 6.08	7632.07	5,193	—31.9	32.	28.	—4.	611.32	528	—13.6
2,074,515	—10.85	12094.56	16,002	+32.3	30.	28.	—2.	1092.52	948	—13.2
2,364,490	+ 9.11	11262.76	8,976	—20.3	34.	33.	—1.	1010.43	1,014	+ 0.3
1,376,384	+18.00	6052.20	4,377	—27.7	34.	32.	—2.	591.52	575	— 2.8
1,142,367	—15.26	7006.65	4,818	—31.2	33.	33.	..	728.78	743	+ 1.9
8,336,781	— 1.63	44048.24	39,366	—10.5	32.4	30.6	—1.8	4034.57	3,808	— 5.6
27,192,242	— 8.87	155091.91	115,971	—25.2	38.2	37.3	—0.9	16464.41	18,918	+14.9



*Comparison of the different Districts of England and Wales, in respect to the Ignorance, its Providence and*

Divisions.	Improvident Marriages.			Bastardy—1830.			Bastardy—
DISTRICTS AND COUNTIES.	Calculated Number of Marriages under 21 Years of Age which would be found in the like Number of Marriages on the Average of all England and Wales in 1844.	Actual Number of Men Married under 21 Years of Age in 1844.	Proportion per Cent. of Marriages of Men under 21 Years of Age above and below the Average on the like Number of Marriages in 1844 in all England and Wales.	Calculated Number of Baptisms which should have been of Illegitimate Children on the Average of the like Number of Baptisms in 1830 in England and Wales.	Number of Baptisms of Illegitimate Children Registered in 1830, in the Parish Registers, brought to account in the Enumeration Abstracts of 1831.	Proportion per Cent. of the Baptisms Registered in 1830 which were of Illegitimate Children above and below the Average of all England and Wales upon the like Number of Baptisms.	Calculated Number of Illegitimate Children to the Total Number of Registered Births on the Average of all England and Wales in 1844.
VI. <i>Western (and chiefly Celtic) Agricultural and Mining Counties—contd.</i>	20	21	22	23	24	25	26
VI. B. Counties of Most Instruction:—							
Cornwall .....	98.41	86	—12.7	448.25	280	—37.5	773.55
Total—Most Instruction .....	98.41	86	—12.7	448.25	280	—37.5	773.55
Total—Western Agricultural and Mining Counties .....	417.37	302	—27.6	1309.58	1,861	+42.1	2953.70
VII. <i>Northern Agricultural and Mining Counties.</i>							
VII. A. Counties of Least Instruction:—							
Westmorland .....	16.09	10	—38.1	87.15	88	+0.9	110.42
North Riding .....	56.21	32	+43.2	294.46	430	+46.0	379.45
Durham .....	110.92	82	—26.3	401.86	380	—5.4	810.39
Total—Least Instruction .....	183.22	124	—32.3	783.47	898	+14.6	1300.26
VII. B. Counties of Most Instruction:—							
Cumberland .....	41.53	31	—25.7	245.34	383	+56.1	371.25
East Riding (with City and Ainsty) .....	91.07	62	—31.9	305.06	356	+16.7	496.26
Northumberland .....	74.10	68	—8.1	305.90	404	+32.1	586.66
Total—Most Instruction .....	206.70	161	—22.2	856.30	1,143	+46.8	1454.17
Total—Northern Agricultural and Mining Counties .....	389.92	285	—26.9	1639.77	2,041	+24.5	2754.43
VIII. <i>Northern and Midland Mining and Manufacturing Counties.</i>							
VIII. A. Counties of Least Instruction:—							
Cheshire .....	109.84	153	+39.6	460.79	588	+27.6	776.05
Lancashire .....	770.48	831	+7.8	1965.26	2,930	+49.1	4341.34
West Riding .....	437.57	734	+67.8	1348.95	1,534	+13.7	2699.39
Staffordshire .....	160.59	215	+34.0	650.31	736	+13.0	1059.80
Worcestershire .....	128.97	151	+17.2	343.25	345	+0.5	811.73
Total—Least Instruction .....	1607.45	2,084	+29.6	4768.56	6,133	+28.6	9688.31
VIII. B. Counties of Most Instruction:—							
Derbyshire .....	78.56	86	+9.5	338.95	372	+9.7	518.98
Gloucestershire .....	140.40	133	—5.1	568.72	458	—19.5	814.42
Warwickshire .....	129.85	130	+0.1	519.03	425	—18.1	879.21
Leicestershire .....	76.02	160	+110.5	260.04	224	—13.8	468.37
Nottinghamshire .....	93.66	148	+58.4	385.07	356	—7.5	596.80
Total—Most Instruction .....	518.49	657	+26.7	2071.81	1,835	—11.4	3277.78
Total—North Midland Mining and Manufacturing Counties .....	2125.94	2,741	+28.9	6840.37	7,968	+16.5	12966.09

*Distribution of the Population, its Social Organization, its Education and Improvidence, and its Crime.—continued.*

1841.		Pauperism.			Savings.			Criminal Commitments.		
Actual Number of Illegitimate Children which are plainly detected in the Registry of Births for 1842 by the defective nature of the entries.	Proportion per Cent. of Illegitimate Children above and below the Average of all England and Wales, in the Year 1842, upon the like Number of Registered Births.	Calculated Number of Paupers which should be found in proportion to the Population in 1841, on the Average of all England and Wales.	Actual Number of Paupers Relieved in each County during the Quarter ended Lady-day, 1844.	Proportion per Cent. of Paupers Relieved in the first Quarter of 1844 above and below the Average of all England and Wales upon the like Population.	Calculated Amount of Deposits in Savings' Banks 20th Nov., 1844, which should be found in Proportion to the Population of each County in 1841, on the Average of all England and Wales.	Actual Amount of Deposits in Savings' Banks, 20th Nov., 1844, in each County.	Proportion per Cent. of Deposits in Savings' Banks, 20th Nov., 1844, above and below the Average on the like Population in England and Wales in 1841.	Calculated Annual Average of Commitments to Assizes and Quarter Sessions in all England and Wales in Three Years in 1842, 1843 and 1844, out of a Male Population of the like Number and Ages.	Actual Annual Commitments to Assizes and Quarter Sessions on the Average of Three Years, 1842, 1843, and 1844, Males.	Proportion per Cent. of Commitments above and below the calculated Average for all England and Wales upon the same Amount of Male Population of the like Ages.
27	28	29	30	31	32	33	34	35	36	37
					£	£				
489	—36.7	31577.45	22,361	—29.2	548,094	525,922	— 4.0	467.82	214.67	—54.1
489	—36.7	31577.45	22,361	—29.2	548,094	525,922	— 4.0	467.82	214.67	—54.1
2,693	— 8.8	127441.47	120,417	— 5.5	2,227,903	1,219,105	—45.2	2010.86	966.34	—51.9
152	+37.8	5233.45	6,223	+18.9	90,665	2,671	—70.9	82.96	27.00	—66.3
501	+26.1	16730.59	14,962	—10.6	327,820	362,415	+10.5	304.59	233.22	—23.4
681	—15.9	30212.23	26,611	—11.9	520,800	209,988	—59.6	487.83	249.33	—49.0
1,334	+ 2.6	52176.27	47,796	— 8.4	939,285	598,774	—36.2	875.38	509.55	—41.8
632	+70.3	16488.24	11,357	—31.1	285,929	219,457	—23.2	253.21	80.33	—68.2
506	+ 1.9	16701.96	15,292	— 8.4	374,619	687,831	+83.6	348.06	266.50	—23.4
594	+ 1.2	24650.81	24,390	— 1.0	401,947	477,476	+18.7	367.28	197.34	—46.3
1,732	+19.1	57841.01	51,039	—11.8	1,062,495	1,384,764	+30.3	968.55	544.17	—43.8
3,066	+11.3	110017.28	98,835	—10.2	2,001,780	1,983,538	— 0.9	1843.93	1053.72	—42.8
1,089	+40.3	34413.63	24,084	—30.0	635,430	612,772	— 3.5	588.03	792.00	+34.5
5,592	+28.8	111934.77	95,689	—14.5	2,677,290	2,150,766	—19.7	2546.67	2802.67	+10.1
2,842	+ 5.3	73283.98	58,927	—19.6	1,853,487	1,206,595	—34.9	1722.14	1318.61	—23.4
1,168	+10.2	40995.23	30,426	—25.8	819,870	520,470	—36.5	784.75	962.67	+22.7
752	— 7.3	31149.29	27,355	—12.2	374,738	423,108	+12.9	334.35	517.33	+54.7
11,443	+18.1	291776.90	236,481	—18.9	6,360,815	4,913,711	—22.7	5975.94	6393.28	+ 6.9
626	+20.6	20391.40	11,341	—44.4	437,181	358,389	—18.0	401.05	270.00	—32.7
737	— 9.5	30635.30	29,700	— 3.0	692,801	869,108	+25.4	605.67	933.00	+54.0
671	—23.7	20391.50	15,503	—23.9	645,155	502,389	—22.1	592.98	824.33	+39.0
501	+ 6.9	20410.31	24,107	+18.1	346,682	196,929	—43.2	306.62	430.33	+40.3
876	+46.8	25089.27	18,751	—26.0	401,356	452,814	+12.8	355.01	307.00	—12.5
3,411	+ 4.1	116917.78	99,222	—15.1	2,523,175	2,379,629	— 5.7	2257.33	2764.66	+22.5
14,854	+14.6	408694.68	335,703	—17.8	8,883,990	7,293,340	—17.9	8233.27	9157.94	+11.2



*Education in the Mining and Manufacturing District of South Staffordshire; being a Report to the Council of the Statistical Society of London by its Secretaries.*

[Read before the Statistical Society of London, 19th April, 1847.]

IN November last a small sum was placed at the disposal of the Secretaries, to procure, by a trustworthy agent, a rapid enumeration of the public day and Sunday schools, and of the children on the books and in attendance in them, in the accompanying form, in such parishes and townships of South Staffordshire, as would suffice to give a fair specimen of the existing provision for day-school education in the great mining and manufacturing district lying to the north-west of Birmingham, comprising a population of about 300,000 souls, and extending into the contiguous counties of Worcester and Salop. Accordingly a very intelligent schoolmaster at Wolverhampton was employed to get the returns made by the responsible masters and superintendents of the several schools, or to fill them up himself on trustworthy evidence. December, 1846, was the period of investigation.

*Schedule of Particulars required concerning the Public Day, Infant, and Sunday Schools, in the Borough of Wolverhampton.*

1. Name of School, and in what place, township, and parish situated.
2. Whether National, British, Infant, or Endowed Charity School.
3. Number and Ages of the Children on the Books:—

Under 5 Years of Age.		5 and not exceeding 10 Years of Age.		10 Years, and not exceeding 15 Years of Age.		Total.	
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.

4. Average Attendance:—

	Males.	Females.	Total.

5. Whether under a Committee, under Trustees, or attached to some Church or Congregation, and what.

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This task he appears to have executed with great zeal and discretion; making a careful return of his authority for each statement, and, in fact, obtaining generally the attestation of the parties interested in the schools. The only schools unreturned were two or three of the National Schools, the leading particulars concerning which were, however, found in a recent report of one of Her Majesty's Inspectors of Schools; and one other, in which the numbers in attendance are stated only on such evidence as could be collected in the neighbourhood. The information thus obtained was then classified by townships, and by the several religious connexions to which the different schools belonged; and from this first double classification has been made the abstract which is now to be submitted to the meeting, in comparison with data derived from the last census, showing the number of children at each period of age, to whom instruction should properly be conveyed by the agency of these schools.

It is the northernmost part of the district which has been selected for the present inquiry, for the convenience of the agent; but its social features are those of the whole of the contiguous region, in which the population is employed in the mining of coal and iron, the working of blast furnaces, and the manufacture of the metal produced into heavy articles of cast-iron, or into the ruder of the wares that are formed out of wrought iron, such as nails, locks, and sadlers' ironmongery. The total area of this region, extending, as it does, into the contiguous counties of Worcester and Salop, is 67,060 acres; and its population in 1841 was 271,725, comprised in the parishes of Hales Owen, Dudley, Old Swinford, King's Swinford, Rowley Regis, Tipton, Walsall, West Bromwich, Wednesbury, Sedgley, and Wolverhampton. The two latter parishes, with the exception of the outlying township of Pelsall, belonging to that of Wolverhampton, form the parliamentary borough of Wolverhampton, comprising an area of 16,630 acres, and a population of 93,245 according to the census of 1841; being upwards of one-third of that contained in the whole district. The great body of the parish of Wolverhampton, included within the borough, is subdivided into four other townships, each containing the population of a considerable town.

The details for each township are given in the annexed schedules, in which are entered, for the two smaller townships, the number of children and young persons at each period of age which they then contained, supposing it to have been in the same proportion to the whole population as that found by express returns to exist in the three more populous townships.



*Children, Young Persons, and Total Population of the several Townships  
in 1841.*

Townships.	Under Five Years of Age.			Five and under Ten.		
	Male.	Female.	Total.	Male.	Female.	Total.
Wolverhampton.....	2,565	2,590	5,155	2,037	2,099	4,136
Bilston .....	1,578	1,578	3,156	1,157	1,231	2,388
Sedgley .....	1,977	2,295	4,272	1,725	1,606	3,331
Wednesfield .....	253	236	489	203	180	383
Willenhall .....	720	624	1,344	576	477	1,053
	7,093	7,323	14,416	5,698	5,593	11,291
	Ten and under Fifteen.			Fifteen and under Twenty.		
Wolverhampton.....	1,945	1,796	3,741	1,883	1,688	3,571
Bilston .....	1,158	1,046	2,204	1,143	960	2,103
Sedgley .....	1,611	1,411	3,022	1,267	1,173	2,440
Wednesfield .....	194	155	349	177	139	316
Willenhall .....	551	407	958	502	367	869
	5,459	4,815	10,724	4,972	4,327	9,299

Townships.	Gross Population.		
	Male.	Female.	Total.
Wolverhampton ....	18,789	17,593	36,382
Bilston .....	12,586	12,233	24,819
Sedgley .....	10,540	9,641	20,181
Wednesfield .....	1,728	1,440	3,168
Willenhall .....	4,904	3,791	8,695
	48,547	44,698	93,245

It is well known, however, that, in the course of the  $5\frac{1}{2}$  years, elapsed from the taking of the census of 1841 to the time of collecting the present facts at the close of last year, there must have been an increase of some 7 per cent. in the population of these townships, if its increase have nearly kept pace with that which has been witnessed in the population of the whole kingdom since the commencement of the present century; and for this increase we ought to make express calculation in comparing materials of the later with those of the former date. But, on the other hand, it has not been within the scope of the present inquiry to include the private, but only the public schools, for reasons both of economy and simplicity. Owing to the defects of the occupation abstract, we have no means of distinguishing the different grades of society; and without a careful and expensive inspection we should be as completely at a loss for the precise quality of the several schools to class with each grade.

But this we may safely assume, as a result of our improving acquaintance with popular education as it exists, that there are, down to this time, *scarcely any private day schools expressly for the children of the labouring classes at all worthy of the name*. There are in fact *no* private day schools, in the common understanding of the term, for the children of the poor, above the years of infancy in the poorer and remoter parts of the kingdom, but only for the children of the middle classes, into the lowest order of which a section of labourers' children are sometimes admitted at reduced fees, to learn to read only, or to learn nothing, as it may happen, in schools in effect unorganized. Even the more respectable sort of dame schools belong properly to the middle classes; while the remainder are properly "out-of-the-way schools," as the parents call them, or mere cottage kitchens of some kind-hearted but totally uneducated neighbour, to which the children are sent merely to be kept out of the way of harm, while their natural guardians are engaged otherwise than in attending to them, as even the mother necessarily is during a considerable portion of the day. When, therefore, we have deducted from the total population the proportion formed by the upper classes, the remainder is that for which the public day and Sunday schools provide all the mentionable instruction which they at present receive. To enumerate any other schools as giving *instruction* to the children of the poor is a grave error, or a grievous perversion of terms; and the defectiveness of even these is the mournful testimony of every one who has examined into their condition.

Now in districts like that under consideration the proportion of residents above the condition of the labourer and artisan is unusually small. No one remains in them who can possibly get away from them. The population consists of a great mass of workers, with a small number of capitalists or agents of capitalists, a backward class of small employers and tradesmen, and a sprinkling of professional and commercial persons of higher instruction in the principal town. In such a population it cannot be one-fifth whose children are sent to *private* day schools for purposes of *instruction*. The results are, however, hereafter brought out in a manner which permits the easy application of any proportion which any one acquainted with the district may assume.

Those who are not acquainted with such districts can scarcely form a conception how exclusively these regions of smoke, cinders, and scoriæ, appear to be occupied by *workpeople* only. Instead of making any addition to the amount of population and numbers of children for the time which has elapsed since 1841, which would be some  $7\frac{1}{2}$  per cent., it will be preferable to deduct 15 per cent., which will make the working population 79,259, out of the 100,000 of which it now consists. The proportion out of this number living at the different periods of age we must assume to be that which was found in the whole population in 1841.

After making this abatement, we shall find the number of children and young persons at each period of age and of each sex, in the gross remainder, compared with the numbers in the schools, to be as follows:—



*Number of Children and Young Persons at each of Four Periods of Age, in the Gross Population and in the Schools.*

Periods of Age.	In the Population of 79,259 relying on Public Schools.			Day Schools.			Sunday Schools.		
				Number on the Books of all the Day Schools, including Infant Schools.			Number on the Books of all the Sunday Schools.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Not exceeding 5 } years of age .....	6,030	6,225	12,255	620	575	1,195	727	725	1,452
5 and not exceeding } 10 years of age....	4,843	4,755	9,598	1,574	1,157	2,731	2,583	2,386	4,969
10 and not exceed- } ing 15 years of age }	4,640	4,094	8,734	493	433	926	2,213	1,727	3,940
15 and not exceed- } ing 20 years of age }	4,226	3,678	7,904	....	....	....	41	36	77
Ages unknown .....	....	....	....	256	183	439	1,238	1,105	2,343
Total .....	19,739	18,752	38,491	2,943	2,348	5,291	6,802	5,979	12,781
Average number in } attendance .....	....	....	....	....	....	4,408	....	....	10,543
Deficiency in at- } tendance .....	....	....	....	....	....	883	....	....	2,238

Thus the acknowledged deficiency of attendance (much less than the Queen's Inspectors find in schools of superior organization which they visit) is equal to the number on the books, above stated, whose ages could not be obtained; and striking these two items out of consideration, as balancing each other, the remaining figures give a true statement of the present extent of popular instruction in this district.

It hence appears that of the children between the ages of 5 and 10, the period principally contemplated in this district as that of instruction, scarcely more than one-fourth are in day schools, and one-half in Sunday schools; while of the children between 10 and 15 years of age, only one-eleventh are in day schools, and less than one-half in Sunday schools, which latter comprise a few of yet more advanced years, besides 1,425 infants under 5. Children of the like infantile age are also to be found in the day schools (including infant schools) to the number of 1,205, being much more than the number to be found in all the day schools upwards of 10 years of age, which is only 866. The general result is, that the proportion receiving the poor daily instruction which the existing public schools supply, is, upon the total population of the same classes, not 1 in 18, or less than one-half of what it ought to be, at the very lowest computation.

The parties to whom even this amount of daily instruction is due are shown in the accompanying tables. With the exception of the British Schools, which are sometimes the subject of a general co-operation, nearly all the day and infant schools, as well as the Sunday schools, are supported by specific religious connexions; a characteristic feature of popular education in the manufacturing districts. Many, indeed, seem to be conducted in the sense of being little more than Sunday schools, continued by a single teacher during the whole week. A similar table gives an equally interesting summary of the Sunday schools, classed according to the several denominations.

TABLE I.

## Public Day and Infant Schools in the Parliamentary Borough of Wolverhampton.

Class of Schools.	No. of Schools.	Under 5 Years of Age.		5 Years and not exceeding 10 Years.		10 Years and not exceeding 15 Years.		15 Years and not exceeding 20 Years.		Ages Unknown.		Total.		Average Attendance.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	Female.	Male.	Female.	Total.
1. Endowed (Church)	2	..	[1] 50	[1] 13	[1] 32	..	..	..	..	[1] 100	..	[2] 190	[1] 45	[2] 186	[1] 47	[2] 233
2. National .....	16	[5] 97	[11] 920	[11] 701	[11] 207	..	..	..	..	[3] 37	[3] 89	[14] 1,090	[14] 1,090	[16] 1,001	[16] 886	[16] 1,887
3. British .....	6	[3] 49	[5] 238	[4] 175	[4] 91	..	..	..	..	[1] 35	[1] 4	[6] 409	[5] 295	[6] 307	[5] 200	[6] 507
4. Wesleyan .....	3	..	[2] 164	[3] 71	[3] 91	..	..	..	..	..	..	[3] 267	[3] 142	[3] 230	[3] 118	[3] 348
5. Roman Catholic ..	3	[2] 40	[2] 99	[2] 73	[2] 32	..	..	..	..	[1] 24	[1] 35	[3] 209	[3] 186	[3] 185	[3] 160	[3] 345
6. Church Infant Schools .....	10	[5] 310	[2] 38	[2] 44	..	..	..	..	..	[1] 60	[1] 55	[6] 408	[6] 384	[6] 325	[4] 257	[10] 778
7. Dissenting Infant Schools .....	4	[4] 124	[4] 65	[4] 80	..	..	..	..	..	..	..	[4] 189	[4] 206	[4] 138	[4] 172	[4] 310
Population in 1841 = 93,245 .....	44	[19] 620	[18] 575	[27] 1,157	[21] 433	..	..	..	..	[7] 256	[6] 183	[38] 2,943	[36] 2,348	[40] 2,372	[38] 1,840	[44] 4,408
Number of Children and Young Persons in 1841 .....		1,195	2,731	926	439	4,972	4,327	9,299								



TABLE II.—Public Sunday Schools in the Parliamentary Borough of Wolverhampton.

Denominations.	No. of Schools.	Under 5 Years of Age.		5 Years and not exceeding 10 Years.		10 Years and not exceeding 15 Years.		15 Years and not exceeding 20 Years.		Ages Unknown.		Total.		Average Attendance.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	Female.	Male.	Sex not stated.	Total.
1. Church of England ..	16	[7] 157	[7] 143	[8] 782	[8] 708	[8] 505	[8] 531	..	..	[5] 406	[5] 365	[13] 1,747	[13] 3,597	[13] 1,458	[3] 131	[16] 2,953
2. Independants .....	5	[4] 95	[4] 100	[4] 348	[4] 361	[4] 394	[4] 277	[1] 20	[1] 20	[1] 60	[1] 50	[5] 808	[5] 1,725	[5] 665	..	[5] 1,287
3. Baptists .....	9	[7] 116	[8] 115	[8] 396	[8] 333	[8] 335	[8] 256	[1] 8	[1] 8	[2] 83	[2] 86	[9] 798	[9] 1,736	[9] 789	..	[9] 1,460
4. Presbyterians .....	1	..	[1] 3	[1] 10	[1] 9	[1] 21	[1] 8	..	..	..	..	[1] 20	[1] 51	[1] 30	..	[1] 45
5. Wesleyans .....	14	[9] 193	[9] 192	[10] 528	[10] 487	[10] 581	[10] 331	..	..	[3] 415	[3] 358	[13] 1,368	[13] 3,085	[13] 1,292	[1] 300	[14] 2,614
6. Primitive Methodists ..	8	[6] 99	[6] 97	[7] 290	[7] 278	[7] 181	[7] 145	..	..	[1] 111	[1] 90	[8] 610	[8] 1,291	[8] 600	..	[8] 1,135
7. New Connexion .....	7	[5] 57	[5] 60	[6] 179	[6] 162	[6] 108	[6] 126	..	..	[2] 38	[2] 51	[7] 399	[7] 781	[7] 309	..	[7] 640
8. Welsh .....	1	..	..	..	..	..	..	..	..	[1] 35	[1] 25	[1] 25	[1] 60	[1] 28	..	[1] 46
9. Unitarians .....	2	[1] 10	[1] 15	[2] 35	[2] 28	[2] 33	[2] 23	[1] 13	[1] 8	..	..	[2] 74	[2] 165	[2] 71	..	[2] 124
10. Roman Catholics ....	2	..	..	[1] 15	[1] 20	[1] 55	[1] 30	..	..	[1] 90	[1] 80	[2] 130	[2] 290	[2] 134	..	[2] 289
Population in 1841 = 93,245	65	[39] 727	[41] 725	[47] 2,583	[47] 2,386	[47] 2,213	[47] 1,727	[3] 41	[3] 36	[16] 1,238	[16] 1,105	[61] 5,979	[61] 12,781	[61] 5,376	[4] 431	[65] 10,543
Number of Children and Young Persons in 1841 }		1,452	1,452	4,969	4,969	5,459	5,459	77	77	2,343	2,343					

TABLE III.

*Averages of each Class of Public Day and Infant Schools in the Parliamentary Borough of Wolverhampton.*

Class of Schools.	Totals on the Books.			Totals of Average Attendance.			
	Male.	Female.	Total.	Sex not stated.	Male.	Female.	Total.
1. Endowed (Church) .....	95·0	45·0	117·5	....	93·0	47·0	116·5
2. National .....	90·8	77·8	168·6	....	62·5	55·4	117·9
3. British .....	68·2	59·0	117·3	....	51·2	40·0	84·5
4. Wesleyan .....	89·0	47·3	136·3	....	76·7	39·3	116·0
5. Roman Catholic .....	69·7	62·0	131·7	....	61·7	53·3	115·0
6. Church (Infant) .....	68·0	64·0	132·0	49·0	54·2	42·8	77·8
7. Dissenting (Infant) .....	47·3	51·5	98·7	....	34·5	43·0	77·5
Average Grand Total....	77·4	65·2	139·2	49·0	59·3	48·4	100·2

TABLE IV.

*Averages of each Denominations of Sunday Schools in the Parliamentary Borough of Wolverhampton.*

Denominations.	Totals on the Books.			Totals of Average Attendance.			
	Male.	Female.	Total.	Sex not stated.	Male.	Female.	Total.
1. Church of England .....	142·3	134·4	276·7	43·7	112·1	104·9	184·6
2. Independants .....	183·4	161·6	345·0	....	133·0	124·4	257·4
3. Baptists .....	104·2	88·7	192·9	....	87·6	74·6	162·2
4. Presbyterians .....	31·0	20·0	51·0	....	30·0	15·0	45·0
5. Wesleyans .....	132·1	105·2	237·3	300·0	99·4	78·6	186·7
6. Primitive Methodists ....	85·2	76·2	161·4	....	75·0	66·9	141·9
7. New Connexion .....	54·6	57·0	111·6	....	44·1	47·3	91·4
8. Welsh .....	35·0	25·0	60·0	....	28·0	18·0	46·0
9. Unitarians .....	45·5	37·0	82·5	....	35·5	26·5	62·0
10. Roman Catholics .....	80·0	65·0	145·0	....	72·0	52·5	124·5
Average Grand Total....	111·5	98·1	209·6	107·7	88·1	77·6	162·2

The quality of these schools is not a subject for rapid statistical survey. But this is quite certain, that the day schools in manufacturing districts supported by specific congregations, distracted by numerous other duties, are not generally the best of their class; and that the Sunday schools, though beyond all value in design, and destined, it is hoped, to an unlimited career of prosperity, are most inefficient instruments, even with the aid of their weekly evening meetings, for conveying those elements of secular instruction which are essential to the general efficiency of spiritual teaching; and yet we see at a glance how extensive is the existing reliance upon them for a complete education, both secular and religious.

Taking the number in day schools and the number in Sunday schools jointly into consideration, it has to be borne in mind that



nearly the whole of the former is included in the latter, under the universal rule that the children in the day schools shall attend the Sunday schools of the same connexion, or, as in the case of the British Schools, that they shall at all events, attend some Sunday school. Between 5 and 10 years of age there are in the Sunday schools, therefore, only 2,398 children in addition to those who likewise attend day schools, or 4,969 attending schools of any kind, out of 9,598 living at the same ages, or scarcely more than one-half. This is the extreme amount of the school-going children between these ages; for supposing that the children frequenting the day schools attend in them on an average for only half this period, or  $2\frac{1}{2}$  years, yet the total number remains the same, since the day school amidst this population has no great number of attendants who do not continue, after they have left it, in some Sunday school; for few who are not worshippers themselves, and consequently desirous that their children shall continue in Sunday schools, have the moral vigour to make the little sacrifice which is required for sending them at all to a day school.

During the next quinquennial period of age, the total number attending schools of any kind is in like manner represented by the total number in the Sunday schools, which is seen to be 3,940 out of 8,734 living at the same ages, or less than one-half, of whom only 866 or little more than one-fifth also attend day schools; and these numbers represent the remainder of the schooling, which, under the existing system, will be obtained by the children now in the schools between the ages of 5 and 10, of whom we perceive that very few will continue in day schools, though the greater number will remain in the Sunday schools. As nearly, therefore, as these returns will bring us to accuracy, it may be concluded that somewhat more than one-half of the children of the labouring classes in this district go to schools of some sort, and that the greater number of these, besides the very little that some of them acquire under 5 years of age in infant schools, have some two or three years of attendance in very imperfect day schools, chiefly at an age just above that of infancy, besides some ten years in Sunday schools, under voluntary teachers, often themselves ignorant and unskilled, however earnest and willing.

Whether the term *heathenism* would be ill or harshly applied to the mental and moral condition in which the other half of the children are growing up, may be left to those who have personal knowledge of this or similar districts. The proportion thus totally neglected may, in the opinion of the writer, be regarded as much greater than is here stated. But to avoid all controversy, he has estimated the number really under instruction at private schools at a sum considerably above its probable amount.

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*Revenue Statistics of the Agra Government, or North-Western Provinces.* By LIEUT.-COLONEL W. H. SYKES, *Vice-President of the Royal Society.*

[Read before the Statistical Section of the British Association at Oxford,  
24th June, 1847.]

ONE of the earliest fruits of the establishment of a Statistical Department at the East India House is a paper of some value, although modestly denominated a "Rough Statistical Return of the Land Revenue, Area, and Population in the districts of the North-Western Provinces for the year 1846—47, transmitted to the India House by the Supreme Government." The cause for the designation "Rough Statistical Return," arises from the constituents of the population being partially given, although the totals of the thirty-one districts under the North-Western Provinces are recorded; but in twelve only of these districts is the population classified in religion, Hindoo and Mahomedan; agricultural and non-agricultural, &c., and in no district whatever is the sex or age stated. Short of these deficiencies, and the omission of the number of cultivators and size of farms, and number of houses, the return is very satisfactory, and founded upon absolute data. The Government of the North-Western Provinces is divided into six provinces, Delhi, Meerut, Rohilcund, Agra, Allahabad, and Benares; each of the first five provinces are divided into five districts, and Benares into six districts. The return distinguishes the number of towns and villages in each district; the area in square geographical miles, the area in acres; the assessed land cultivated and culturable, and the free and barren land; the assessment upon each district; the rate per acre on the total area, the rate per acre of cultivated and culturable land, the rate per acre on the total cultivation; the gross collections, the charges of the collection, the per centage of charge upon the assessment, the net Stamp collections, and the net Excise collections; and the columns under the head of population are closed by an enumeration of the average number of persons to each square mile. In the province of Delhi, there are 3,074 towns and villages, in Meerut 8,779, in Rohilcund 14,829, in Agra 7,254, in Allahabad 10,232, and in Benares 32,865, making a total of 79,033 towns and villages located on 51,861 square miles, or rather more than three towns or villages to every two square miles; while in the Deccan there was only one town or village to every four square miles; and as the total population is stated at 19,733,742, the average population of towns and villages would be 249 souls. Although the population to a square mile will be found to be strikingly and questionably considerable; this proportion to a village is less than I found to be the averages of the population of villages in the Deccan in my census of 1827-28, which was 266 souls, with an average population to the square mile of only 67, while the North-Western Provinces are stated to have  $380\frac{1}{2}$  souls.

The total area in square miles of the North-Western Provinces is 51,861 square miles; the different provinces varying from 6,274 in Delhi to 13,212 in Benares. The total area in acres is 43,937,062, and as the Trigonometrical and Revenue Surveys have passed over



the whole country, it may be inferred that the areas in geographical miles and in statute acres are trustworthy as bases for subsequent calculations.

The assessed land consists of that absolutely cultivated, and that capable of cultivation; the amount of the former varies from 2,410,266 acres in Delhi to 5,313,014 acres in Benares; and the total land under cultivation is 22,340,840 acres, which is somewhat more than one acre per head to the population. The culturable but not cultivated land varies from 826,005 acres in Agra to 2,549,116 acres in Benares. The total culturable but uncultivated land is 10,528,650 acres, or about 24 per cent. of the whole area, but nearly 31 per cent. of the sum of the cultivated, culturable, and free lands.

The Lakheraj or free lands vary from 86,877 acres in Delhi to 235,826 acres in Benares, the total free lands being 1,167,610 acres, or about 3·4 per cent. of the whole cultivated and culturable land. The barren land varies from 533,899 acres in Delhi to 2,744,501 in Benares, and the total barren land consisted of 8,983,573 acres, being nearly 20½ per cent. of the whole area. The tax upon each acre for the benefit of Government has been denominated an assessment, essentially as a rent, and by other names; but I deny that the proprietary right in the *appropriated* soil rests with the Government, the supposed rent therefore is nothing more nor less than a tax, as much as the land or house tax in England. The total demand for 1846-7 is 4,03,91,527 rupees, or about four millions sterling, and varies from 3,50,897 rupees in the Delhi *district* to 21,29,534 rupees in the Allahabad *district*, and from 32,84,531 rupees in the Delhi *division* to 84,68,438 rupees in the Allahabad *division*. The facility with which this tax is collected, and the consequently presumed absence of pressure upon the means of the people is evidenced by the fact of the gross collections of the preceding year having absolutely amounted to 4,04,77,661 rupees. This revenue is collected at a cost varying from 4·73 per cent., 4·83, and 4·89 per cent. respectively in the districts of Ghazee pore, Jounpoor, and Allyghur, to 16·6 per cent., 11·63 per cent., and 8·08 per cent. respectively in the districts of Delhi, Hurreeannah, and Furruckabad. The average cost of collection of the divisions varied from 5·46 per cent. in Benares to 8·15 in Delhi, and the average cost of collection of the whole revenue is 6·27 per cent. It will be unnecessary to touch upon the average land tax per acre upon the whole area, or upon the cultivated or culturable land combined; and I will confine myself to the average rate per acre upon the land absolutely in cultivation. The maximum average rate in any district is two rupees, eleven annas, and eleven pice, or five shillings and sixpence per acre in the Futtehpoor district of the Allahabad division; and a rate of four shillings per acre or above that sum only obtains in fourteen of the thirty-two districts of the North-Western Provinces. The minimum average rate is ten annas and three pice per acre, or a decimal more than fifteen pence per acre, this is in the Hurreeannah district, and in this district there are 705,379 acres of land under cultivation upon this assessment, with 921,346 acres of land culturable but not cultivated, and with only 145,008 acres of barren land. These peculiar circumstances are probably accounted for by the paucity of inhabitants, there being only 98·4

souls to a square mile, while the average for the North-Western Provinces is  $380\frac{1}{2}$ . The average land tax per acre in the different divisions varies from one rupee, five annas, and nine pice, or  $2s. 8\frac{1}{8}d.$ , per acre in the Delhi division, to two rupees, four annas, and three pice, or  $4s. 6\frac{6}{16}d.$ , in the Agra division. The average land tax per acre for the whole of the land under cultivation in the North-Western Provinces in 1846-47 was one rupee, twelve annas, and eleven pice, or  $3s. 7\frac{1}{2}d.$ , per acre, and this tax is upon lands that produce those remunerative returns, sugar, indigo, cotton, condiments, &c., which Mr. Allen says is sometimes worth 200 rupees per acre. Even as far back as 1793, when the land at Dacca and Beerboom was assessed at 4 rupees the beega, or  $24s.$  the acre; the profits of a beega of sugar-cane cultivation with *hired labour* was  $30\frac{1}{2}$  rupees or  $61s.$  at Dacca, and at Beerboom  $9\frac{1}{2}$  rupees or  $19s.$  per beega. At Burdwan with beegas assessed at 3 rupees, the profit was  $15\frac{1}{4}$  rupees or  $30s. 6d.$  per beega. At these places the produce in sugar varied from 21 cwt. per beega at Burdwan to  $27\frac{1}{4}$  cwt. at Dacca; but this must relate to Goor and not clayed sugars, for a beega of land produces only  $3\frac{1}{2}$  maunds, or 287 lbs. of clayed sugar; and the proportion of clayed sugar to Goor is 7 to 24: therefore  $2\frac{1}{2}$  to  $2\frac{2}{3}$  acres produce a ton of sugar. As a specimen of the proportion of the crops grown, the following table from the Report of the Settlement of the Calpee and Hummerpoor Pergunnahs in 1842, by Messrs. W. Muir and C. Allen, of the Bengal Civil Service, may be given. The district lies on the right bank of the Jumna, opposite Cawnpoor.

Per Centage of the Principal Crops.

Khurreeff or Monsoon.						Rubeec or Spring.				
Jowara.	Bajra.	Cotton.	Sugar-cane.	Moong	Total.	Wheat.	Gram.	Al, Morinda Citrifolia.	Koosom, Carthamus Tinctoria.	Total.
$17\frac{7}{7}$	$13\frac{1}{4}$	$14\frac{2}{7}$	$\frac{1}{7}^*$	$3\frac{1}{4}$	$48\frac{1}{2}$	$20\frac{1}{4}$	$25\frac{1}{2}$	$2\frac{1}{4}$	$3\frac{1}{2}$	$51\frac{1}{2}$

\* 933 lbs. of sugar per acre, but the raw produce is 2,500 lbs. as in West Indies.

It has been much the fashion in Great Britain, and even by some parties in India, to lament the oppressive taxation of its subjects by the Company's Government in India, and I have now before me a circular printed for the express purpose of vilifying the land revenue system of India. Amongst the passages are the following:—

“The land tax has converted once flourishing and happy villages into abodes of a few miserable beggars.

“The land tax has driven numerous tracts of country out of cultivation and restored them to their original occupants, the wild beasts of the jungle.

“The land tax has demoralized the natives, and led them to resort to chicanery and fraud, and to the commission of almost every crime in order to obtain a precarious subsistence.



"The land tax has driven the once peaceful and industrious Ryot to the alternative of becoming a robber and an assassin, or of dying from actual starvation."

And it goes on to say, "All these things might be *proved by ample and incontrovertible evidence*;" and this malevolent assertion is printed in Italics to give it increased force.

The author's incontrovertible evidence plainly did not consist of Statistics, for a return to an order of the Court of Directors of the Commerce of India, dated 6th August, 1845, tells us that the export of sugar from Calcutta has increased from 210,991 bazar maunds of the value of 16,47,009 rupees in 1834-45, to 1,513,307 maunds of the value of 1,33,75,426 rupees in 1841-42. Sugar from Bombay has increased from the value of 6,90,194 rupees to the value of 16,38,199 rupees. Indigo from Calcutta in 1834-45, from 84,841 factory maunds of the value of 84,84,612 rupees, to 121,588 bazar maunds of the value of 2,39,71,615 rupees in 1841-42. Indigo from Madras of the value of 4,10,504 rupees in 1834-45, to 31,92,158 rupees in 1841-42. Opium from Calcutta in 1834-45 from 11,050 chests, of the value of 1,08,55,569 rupees, to 19,739 chests of the value of 1,44,98,611 rupees in 1841-42; and from Bombay, opium of the value of 99,35,965 rupees in 1834-35, to the value of 1,12,79,820 rupees in 1841-42. The export of cotton from Bengal had fallen off; but from Madras it had increased from 664,943 maunds of the value of 18,33,505 rupees in 1834-45, to the very considerable amount of 3,337,935 maunds of the value of 21,28,587 rupees in 1841-42; and from Bombay in the same periods, from the value (the quantity not being given,) of 1,15,97,805 rupees to 2,16,7,8974 rupees. The export of grain had increased from all the Presidencies. Calcutta, from 1,714,680 maunds of the value of 27,50,128 rupees, to 2,651,184 maunds of the value of 37,21,834 rupees. From Madras, from 18,33,505 rupees value to 21,28,587 rupees value. From Bombay the export of grain had increased from the value of 5,24,594 rupees to 6,37,623 rupees.

These exports are entirely independent of the coasting trade of India which is considerable. I have taken the chief exports of India, but might have evidenced other products. The total amount of the value of the export trade of all India has increased from 9,67,47,286 rupees in 1834-45, to the value of 16,02,08,574 rupees in 1841-42; and so marked is the productive power of India that it absorbs annually an average of about one million and three quarters sterling of bullion, of which there is no evidence whatever that it finds its way out of the country again. A very great difference in the value of the same amount of products between one period and another, by enhanced prices might occur without any increase in cultivation, but it is next to a physical impossibility that the extensive increase in the *produce* of the land which I have shown, could have occurred without a proportionate increase in the breadth of land cultivated, and this disposes of the reckless assertion that "the land tax has driven immense tracts of country out of cultivation, and restored them to their original occupants, the wild beasts." Increased cultivation demands increased industry and increase in the number of hands employed; and this disposes of the assertion of the "once flourishing and happy villages being converted into abodes of a few

miserable beggars." The "Friend of India," of the 18th March, 1847, in a leading article shows that the increase of revenue in the North-Western Provinces in forty years has been a million and a half sterling, or 75 per cent., and adds, "If this land tax was more than the country was able to bear, we should be constrained at once to urge that the British Government has higher and more sacred duties to perform in India than merely to increase the public revenue, and that whenever the augmentation arises from demands which destroy the happiness and blight the prosperity of the province, it can be considered only as a gross dereliction of duty. But it is pleasing to learn from the best authority that this increase of revenue 'has been attended with improvement in the condition of the rural population. Old deserted villages have been reinhabited to an extent little known; new ones have been built; hamlets are every day rising as shoots struck off from the parent stock; and in every direction uncultivated plains and tiger jungles have been converted into waving corn-fields.'" This last paragraph is a quotation by the Editor of the "Friend of India" from the *best authority*, and I must say my information, as far as it extends, is confirmatory of these statements.

But the comparative lightness of the assessment is not confined to the North-Western Provinces. Although, from the permanent settlement existing in Bengal, the collectors are absolved from the troubles of the details of the land tax, its precise amount or average cannot be given; it is understood nevertheless to fall as light as in parts of the North-Western Provinces, and in confirmation of this belief, a friend of mine, who was formerly extensively engaged in indigo planting in Jessore, assured me that his firm paid only one rupee or two shillings, a beegah, to the Zemindars for the indigo land they rented. With respect to my own experience of the pressure of the land tax in Western India, twenty years have elapsed since I demonstrated, in my official reports to the Government of Bombay as Statistical Reporter, that the average assessments in the four collectorates of the Deccan was only one rupee and fourteen reas per acre, or two shillings and three farthings. In the Poona collectorate it was 2s. per acre; in the Ahmudnuggur it was not quite 2s. 6d. per acre; in Dhawar not quite 1s. 6d. per acre; and in Khandesh not quite 3s. 2d. per acre. The pressure of this assessment must have been easy in reference to the proportion of the produce represented by the land tax. The collector of Poona, Captain Robertson, determined, from experiments which he superintended personally, that a beega of medium land produced 412 seers measure of grain; the farmers generally admitted only 240 seers as the produce, and taking their estimate and not that of Captain Robertson, and supposing the average price of wheat, jowara, and bajra (the chief grains), to have been 30 seers the rupee (which is above the average of 20 years), then the proportion of the produce taken is not quite two-fifteenths; at 40 seers per rupee being less than a sixth; at 60 seers per rupee it is somewhat more than a fourth; but at 15 seers per rupee not quite one-fifteenth. But if 412 seers, the produce of the beega, be taken, then the proportion of the crop which the farmer pays in land tax is infinitely less than the above.

In 1827-28 the whole revenue of the four collectorates of the



Deccan, viewed as a Capitation tax, averaged eight shillings per head. In the North-Western Provinces the revenue, including the Stamps and Excise, being 4,30,77,464 rupees, and the reduced enumeration of the population 19,733,742 souls, it follows that the revenue falls as a capitation tax at  $2\frac{2}{10}$  rupees per head, or a decimal less than 4s. 5d. sterling.

The cost of the collection of the revenue varies from 16·6 per cent. in the Delhi district, this being an isolated high charge, to 4·73 per cent. in the Ghazeepore district. The average in the divisions varies from 5·46 per cent. in the Benares division to 8·15 per cent. in the Delhi division. The average cost of the collection of the whole revenue is 6·27 per cent.

The amount of Stamp duty collected is 11,69,742 rupees, and of Excise duty 14,30,061 rupees.

It has been usual hitherto to estimate the population of the North-Western Provinces at 32 millions, but the present return, imperfect as it is, reduces the amount to 19,733,742 souls; but even this reduced number gives a startling proportion to the square mile, not only in some particular districts but in respect to the average to the square mile for the whole territory, which is stated to be  $380\frac{1}{2}$ . Throwing out those districts in which populous cities are located, such as Benares with 801 inhabitants to the square mile, Delhi with 640, and Ghazeepore 641, there are, nevertheless, other districts without large cities, where the average runs very high. Jounpore 599·6 inhabitants to the square mile; Azimghur 515·4; Furruckabad 497·5; (Agra with its large city even has less than this, 468·5;) and Allyghur, 571·7 inhabitants to the square mile. The lowest average is 98·4 in the Hurreeannah district. In the different divisions the average to the square mile varies from 263·7 in the Delhi division, to 483·7 in the Benares division. These proportions are very startling when we compare them with the average population to the square mile in other countries of the globe; but how much more startling would they have been had the former estimate of 32 millions been used as the basis of the calculation. These circumstances afford an apt illustration of the dangerous fallacies that are allowed to become public beliefs, without even an inquiry as to the probabilities upon which the beliefs are founded, much less an inquiry into the facts which should be their basis. Numerous writers have stated the population of India to be 150 millions of souls; of this number, 32 millions were allotted to the North-Western Provinces, and I have myself used these numbers as data in certain deductions in *Statistics of Civil and Criminal Justice in India*. An inquiry of a careful nature, but yet this inquiry, incapable of being characterized as a census, reduces the 32 millions to less than 20 millions! Why, if this proportionate reduction be applicable to the 150 millions we shall have 56 millions swept away, and about 94 millions only left for the population of India. But the Editor of the "*Friend of India*" in some apposite remarks, 18th March, 1847, which the nature of even the last inquiries fully justify, would raise doubts as to the actual population approaching anything like 100 millions. He is incredulous that the North-Western Provinces should have  $380\frac{1}{2}$  inhabitants to the square mile, while China, which is generally looked upon as the

most densely populated country in the world, has only 283 inhabitants to the square mile. The Editor, however, does not refer to the very great density of the population in China, in districts in the neighbourhood of great rivers, as given by Mr. Montgomery Martin in his recent work upon China, such as 774 and 671 inhabitants in Nankin and Hang Choo Foo respectively; while the general average of the country is reduced to 283 souls to the square mile by three out of the fifteen provinces of the Chinese Empire Proper, averaging less than 100 inhabitants (Yun Mun Foo only 51,) to the square mile, and Ching Too Foo only 128. It is possible the Editor's anticipation of a further reduction may take place, when a proper census has been made; but we are not without an instance in our own Colonies of a higher amount of population to the square mile than even in the highest average of any district in the North-Western Provinces, and considerably more than double the average of  $380\frac{1}{2}$  per square mile for the whole territory; this is in Barbadoes. The population from official returns in Mr. Martin's Colonies is put down at 101,242, and the area in acres, but from what authority he does not say, is 106,470; now at 847·2 acres to the square mile the area of Barbadoes is 126 miles, and the souls to the square mile 804. But Mr. Martin elsewhere states the area in square miles as 162, but this is incompatible with the area derived from the acres: even this, however, would give 625 inhabitants to the square mile, not very far from double that of the North-Western Provinces. But in India itself there are not wanting grounds for asserting that a very dense agricultural population does exist. From inquiries instituted by my friend the indigo planter previously referred to, it was found that the population of the villages in Jessore, within the boundaries of which, his firm rented their indigo lands, gave a population of about 700 inhabitants to the square mile, and this extended over an area of 20 square miles. The returns of the North-Western Provinces may therefore be correct.

I have previously stated that the distinctions of sex are nowhere given in the returns; and in 12 districts only are the people classed as Hindoo and Mahomedan, agricultural and non-agricultural. The great features are that amongst the Hindoos the agriculturists greatly prevail over the non-agriculturists, in the proportion of 4,051,484 to 2,148,472 souls. Amongst the Mahomedans the reverse is the case in the proportion of agricultural to non-agricultural of 507,295 to 746,826 souls. It has usually been estimated that the Hindoos number 15 to 1 of the Mahomedans in India, and this does hold good in many parts of India, but even in the peculiar seats of the proximity of the Imperial Mahomedan power, in these 12 districts the proportions were not quite 6 to 1, being 6,199,956 Hindoos to 1,254,121 Mahomedans. On the whole the Return from the Agra Government is a valuable addition to our knowledge of the revenue and taxation of India, and testifies to the motive power of the Statistical department at the India House.



## Rough Statistical Return of Land Revenue, Area, and

Divisions.	Districts.	Number of Mouzahs, or Townships.	Area in Square Geo- graphical Miles of 847.2 Acres each.	Area in Acres.	Malgoozaree, or Assessed Land.		Minhaee, or Unassessed Land.		Demand on account of Land Revenue for 1846-7.	Rate per Acre on Total Area.			Rate per Acre on Total
					Cultivated.	Culturable.	Lakheraj.	Barren.		R.	A.	P.	
1	2	3	4	5	6	7	8	9	10	11			12
DELHI.	Paneeput .....	581	1,203	1,019,005	{ 328,762	187,813	1,239	113,268	Rupees. 8,12,399	0	12	9	1
	Hurreeannah...	496	2,142	1,814,504	{ ..... 3,87,	3,87,	983.	.....					
	Delhi .....	412	456	386,574	705,379	921,356	42,761	145,008	4,54,936	0	4	1	0
	Rohtuck .....	300	1,013	858,544	219,515	71,418	9,725	85,916	3,50,897	0	14	7	1
	Goorgaon .....	1,285	1,460	1,236,532	462,133	335,418	31,436	29,557	6,28,265	0	11	8	0
	Goorgaon .....	1,285	1,460	1,236,532	694,477	380,129	1,716	160,210	10,38,034	0	13	5	0
	Total .....	3,074	6,274	5,315,159	{ 2,410,266	1,896,134	86,877	533,899	32,84,531	0	9	10	0
MEERUT.	Seharunpore ...	1,856	1,481	1,254,979	672,783	392,508	25,214	164,474	10,64,663	0	13	6	0
	Mozuffurnuggur	1,128	1,218	1,032,229	606,646	236,216	38,504	150,863	10,98,762	1	1	0	1
	Meerut .....	2,209	2,267	1,920,345	1,122,195	476,427	100,645	221,078	17,23,788	0	14	4	1
	Bolundshuhur..	1,612	1,404	1,189,726	657,071	359,713	116,727	56,215	10,50,894	0	14	1	1
	Allyghur .....	1,974	1,340	1,135,580	901,405	129,710	34,453	70,012	19,69,987	1	11	6	1
	Total .....	8,779	7,710	6,532,859	3,960,100	1,594,574	315,543	662,642	69,08,094	1	0	11	1
ROHILCUND.	Bijnour .....	3,031	1,224	1,036,034	517,065	236,568	36,827	245,574	11,50,832	1	4	9	1
	Moradabad .....	3,571	1,817	1,539,653	622,936	539,668	123,321	253,728	12,92,103	0	12	9	1
	Budaon .....	2,084	1,716	1,453,888	752,562	416,518	73,174	211,634	10,96,196	0	12	0	0
	Barrelly and } Pilleebheet.. }	3,281	2,257	1,912,445	{ 848,228	556,599	73,555	316,097	17,76,329	0	14	10	1
	Shahjehanpore .	2,862	1,869	1,584,138	{ 674,161	565,703	29,546	257,651	10,53,599	0	10	7	0
	Total .....	14,829	8,883	7,526,158	{ 3,414,952	2,315,056	336,423	1,284,684	63,69,359	0	10	5	1
AGRA.	Muttra .....	948	1,103	934,279	676,323	106,129	21,054	130,773	16,40,479	1	11	2	2
	Agra .....	1,287	1,403	1,188,414	813,655	92,931	5,565	276,263	16,07,981	1	5	7	1
	Furruckabad ...	2,054	1,562	1,323,206	652,075	305,095	26,775	337,264	14,14,353	1	1	1	1
	Mynpoorie ...	1,467	1,510	1,280,062	613,338	182,000	7,090	477,634	13,58,131	1	0	10	1
	Etawah .....	1,518	1,265	1,071,637	477,901	139,850	27,346	426,540	13,09,884	1	3	6	2
	Total .....	7,254	6,843	5,797,598	{ 3,233,292	826,005	87,830	1,648,474	73,30,828	1	4	2	1
ALLAHABAD.	Cawnpore .....	2,279	1,756	1,480,161	781,173	163,563	44,015	499,350	20,46,197	1	6	0	2
	Futtehpore ...	1,614	1,193	1,010,380	518,812	123,985	8,093	359,490	14,26,467	1	6	7	2
	Humeerpore & } Calpee .....	1,083	1,761	1,439,282	720,998	353,872	16,838	347,574	12,52,927	0	13	11	1
	Banda .....	1,252	2,176	1,843,451	990,709	474,756	6,346	371,640	16,03,313	0	13	10	1
	Allahabad .....	4,004	2,113	1,790,243	997,508	231,597	29,819	531,319	21,39,534	1	3	1	1
	Total .....	10,232	8,939	7,571,457	4,009,200	1,347,773	105,111	2,109,373	84,68,438	1	1	10	1
BENARES.	Gorackpore ....	15,607	5,521	4,677,792	1,945,553	1,695,386	142,507	894,346	20,83,247	0	7	1	0
	Azimghur .....	6,277	1,899	1,609,396	755,270	257,314	40,455	556,357	14,89,918	0	14	9	1
	Jounpore .....	3,380	1,144	968,970	593,915	72,847	6,466	205,742	12,52,943	1	4	8	1
	Mirzapore .....	3,203	2,307	1,954,120	{ 664,252	344,539	14,720	579,235	8,42,737	0	6	10	0
	Benares .....	2,013	691	585,318	417,595	33,909	3,509	130,305	8,64,639	1	7	7	1
	Ghazeepore ....	2,385	1,650	1,398,235	936,429	145,121	28,169	288,516	14,97,093	1	1	1	1
	Total .....	32,865	13,212	11,193,831	{ 5,313,014	2,549,116	235,826	2,744,501	80,30,577	0	11	5	1
	Grand Total	79,033	51,861	43,937,062	{ 22,340,824	10,528,658	1,167,610	8,983,573	403,91,527	0	14	8	1

## Population in the Districts of the North-Western Provinces.

Rate per Acre on Total Cultivation.	Gross Collections of Land Revenue in 1845-6.	Charges of full Revenue Establishments in Collector's and District Offices.	Per centage of Revenue Charge on Demand for 1846-7.	Net Stamp Collections for 1845-6.	Net Stamp Akaree Collections for 1845-6.	Population.					Number of Persons to each Square Geographical Mile.
						Hindoo.		Mahomedan and others not Hindoo.		Total.	
						Agricultural.	Non-Agricultural.	Agricultural.	Non-Agricultural.		
13	14	15	16	17	18	19	20	21	22	23	24
A. P.	Rupees.	Rupees.		Rupees.	Rupees.						
7 6	8,21,665	53,232	6.55	7,484	5,115	..	..	..	..	231,511	192.4
10 3	4,41,165	52,920	11.63	3,153	3,213	150,100	13,480	37,174	9,995	210,749	98.4
9 6	3,64,124	58,260	16.06	51,450	36,038	..	..	..	..	291,861	640.0
5 9	6,30,619	40,824	6.49	6,573	1,592	150,572	81,531	16,720	45,286	294,109	290.3
7 10	10,45,339	62,544	6.00	6,192	4,912	176,428	105,080	109,792	69,026	460,826	315.3
5 9	33,02,912	2,67,780	8.15	74,852	50,870	..	..	..	..	1,488,556	263.7
9 3	10,38,934	69,864	6.56	31,323	23,183	..	..	..	..	454,331	306.8
12 11	10,80,781	62,340	5.67	15,637	22,839	..	..	..	..	443,177	363.8
8 6	17,72,150	93,312	5.41	52,226	53,752	444,062	120,555	82,036	60,211	706,864	311.9
9 7	10,73,050	69,492	6.61	12,547	9,481	..	..	..	..	446,358	317.9
2 11	19,84,161	96,516	4.89	56,642	18,842	356,798	324,396	21,977	62,990	766,161	571.7
11 10	69,51,076	3,91,524	5.66	1,68,375	1,28,097	..	..	..	..	2,816,891	365.3
3 7	12,07,412	74,736	6.49	24,390	18,894	196,994	168,554	41,184	133,084	539,816	441.0
1 2	12,47,859	95,988	7.42	59,508	33,874	..	..	..	..	861,146	473.9
7 3	11,12,452	80,472	7.34	26,815	32,524	..	..	..	..	641,671	373.9
1 6	17,66,213	1,11,672	6.28	56,388	1,02,244	634,880	187,902	116,941	103,933	1,043,656	462.4
9 0	10,40,256	71,796	6.81	18,066	69,895	..	..	..	..	668,749	357.8
13 10	63,74,192	4,34,664	6.82	1,85,167	2,57,451	..	..	..	..	3,755,038	422.7
6 10	16,26,339	1,04,124	6.34	20,721	16,129	..	..	..	..	460,772	417.7
15 7	16,00,322	97,128	6.04	89,602	41,104	288,885	297,371	8,675	62,251	657,182	468.5
2 8	13,05,492	1,24,560	8.08	43,941	87,257	421,934	266,023	23,603	65,529	777,089	497.5
3 3	11,86,731	84,852	6.24	20,908	21,958	..	..	..	..	481,781	319.0
11 10	13,01,801	83,352	6.36	7,528	19,257	269,925	162,534	4,788	21,363	458,610	362.5
4 3	70,20,685	4,94,016	6.73	1,82,700	1,85,705	..	..	..	..	2,835,434	414.3
9 10	20,22,850	1,12,236	5.48	56,075	1,34,761	..	..	..	..	550,505	313.5
11 11	14,29,926	81,408	5.07	22,484	59,173	..	..	..	..	380,086	318.6
11 9	14,71,213	95,592	7.62	8,670	21,089	..	..	..	..	316,558	186.1
9 10	16,47,343	1,14,684	7.15	20,549	48,184	287,163	149,370	12,857	31,038	480,428	220.8
2 4	21,25,157	1,05,76	4.92	60,162	1,36,871	..	..	..	..	719,276	340.4
1 9	86,96,989	5,09,196	6.01	1,67,940	4,00,078	..	..	..	..	2,446,853	273.7
1 0	20,65,383	1,08,864	5.24	96,031	2,02,950	..	..	..	..	2,386,831	432.3
15 6	14,92,175	80,556	5.04	54,021	76,362	..	..	..	..	978,798	515.4
1 9	12,53,646	69,564	4.83	46,140	54,079	..	..	..	..	686,004	599.6
4 3	9,08,191	47,100	5.58	45,165	92,387	..	..	..	..	726,138	314.7
1 1	9,14,021	69,612	8.05	73,090	99,241	..	..	..	..	554,112	801.9
9 6	14,98,391	70,896	4.73	76,261	82,861	673,743	271,676	31,548	82,120	1,059,087	641.0
8 2	81,31,807	4,37,592	5.46	3,90,708	4,07,880	..	..	..	..	6,390,970	483.7
12 11	40,477,661	25,34,772	6.27	11,69,742	14,30,061	4,051,484	2,148,472	507,295	746,826	19,733,742	380.5

(Signed)

J. THORNTON, Sec. to Government, North-Western Provinces.



*On the Mortality among Her Majesty's Troops serving in the Colonies during the Years 1844 and 1845.* By LIEUT.-COL. A. M. TULLOCH, F.S.S.

[Read before the Statistical Society, 21st June, 1847.]

ABOUT seven years ago a very extensive investigation was made, under the authority of Parliament, into the Sickness and Mortality among the British Troops in the Colonies, the results of which formed the basis of several papers that were read in this Society. The object of the present inquiry is to ascertain how far the various sanitary arrangements which followed upon that investigation have tended to advance the important object they had in view, and whether they hold out sufficient encouragement, as regards the saving of life, to induce perseverance in the career of improvement.

It is to be regretted that time would not admit of the results, in the present instance, being based on the returns of all the years which have elapsed since 1836, when the series of Statistical Reports on the Health of the Army terminated, and that they have necessarily been confined to the two latest years for which complete returns have been received from abroad, viz., those ending 31st March, 1845, and 31st March, 1846. I am aware that results extending over so limited a period do not afford an accurate statistical comparison with those which extend over twenty years, as experience has shown that in the most unhealthy of our colonies the mortality is extremely variable, sometimes for two, three, or even more years, undergoing a marked diminution only to reappear with tenfold violence. Had so short a period, therefore, as two years been taken as the test of comparison in any one colony, the conclusions might, at best, have been considered as doubtful, but when that comparison is extended over the whole of the colonies, both collectively and individually, and is found every where to exhibit the same remarkable improvement in the health of the troops, no reasonable doubt can be entertained of their accuracy, unless it could be supposed that the two years under review have been healthy beyond others, all over the globe, which is highly improbable.

In this view the following table is submitted for the consideration of the Society, trusting that the period is not far distant when the evidence therein adduced will be supported by full and satisfactory details extending over a longer period.

It indicates a very considerable improvement in the health of the troops in all the colonies since 1836, particularly in Jamaica, the West Indies, Bermuda, the Mauritius, and St. Helena, where, since March, 1837, they have enjoyed the advantage of fresh meat on five days in the week, instead of being, in a great measure, restricted to salt provisions. In Jamaica and the West Indies, but particularly in the former, several important changes have also been made in the localities where the white troops are stationed, and in the frequency of reliefs which now take place every third year, thereby preventing the constitution of the soldier from being broken down by repeated inroads of tropical disease.

*Mortality among White Troops at the undermentioned Stations for the Two Years antecedent to 31st March, 1846, compared with the Mortality for the Twenty Years antecedent to 1836, as shown in the Military Statistical Reports.*

	Average Strength of Garrison.	Mortality.			Ratio of Deaths Annually per 1000 of Strength.	Ratio Antece- dent to 1836 by Statisti- cal Re- ports.	Difference in the Mortality of these two Periods.		
		Deaths in 1844.	Deaths in 1845.	Total Deaths in Two Years.			De- crease.	In- crease.	
I.									
Gibraltar .....	3,371	41	41	82	12 $\frac{2}{10}$	22	9 $\frac{8}{10}$		
Malta .....	1,858	36	31	67	18	18 $\frac{7}{10}$	7 $\frac{7}{10}$		
Ionian Islands .....	2,537	35	33	68	13 $\frac{4}{10}$	28 $\frac{3}{10}$	14 $\frac{9}{10}$		
Total, Mediterranean } Station .....	7,766	112	105	217	14	23 $\frac{5}{10}$	9 $\frac{5}{10}$		
II.									
Bermuda .....	1,336	17	14	31	11 $\frac{6}{10}$	32 $\frac{1}{10}$	20 $\frac{5}{10}$		
Nova Scotia and New } Brunswick .....	2,525	28	24	52	10 $\frac{3}{10}$	17 $\frac{8}{10}$	7 $\frac{5}{10}$		
Canada .....	7,447	113	117	230	15 $\frac{4}{10}$	20	4 $\frac{6}{10}$		
Newfoundland .....	386	5	3	8	10 $\frac{4}{10}$	37 $\frac{7}{10}$	27 $\frac{3}{10}$		
Total, American Sta- } tions .....	11,694	163	158	321	13 $\frac{7}{10}$	21 $\frac{2}{10}$	7 $\frac{5}{10}$		
III.									
New South Wales.....	1,430	25	18	43	15	13 $\frac{4}{10}$ } 14	6 $\frac{6}{10}$		
Van Diemens Land ....	1,846	16	29	45	12 $\frac{2}{10}$				
Cape of Good Hope....	3,018	33	44	77	12 $\frac{7}{10}$			15 $\frac{5}{10}$	2 $\frac{8}{10}$
St. Helena .....	454	5	3	8	8 $\frac{8}{10}$			33	24 $\frac{2}{10}$
Total of these Four } Stations .....	6,748	79	94	173	12 $\frac{8}{10}$	15	2 $\frac{2}{10}$		

SUMMARY OF HEALTHY STATIONS.

Group I. ....	7,766	112	105	217	14	23 <sup>5</sup> <sub>10</sub>	9 <sup>5</sup> <sub>10</sub>	
"  II. ....	11,694	163	158	321	13 <sup>7</sup> <sub>10</sub>	21 <sup>2</sup> <sub>10</sub>	7 <sup>7</sup> <sub>10</sub>	
"  III. ....	6,748	79	94	173	12 <sup>8</sup> <sub>10</sub>	15	2 <sup>2</sup> <sub>10</sub>	
Total.....	26,208	354	357	711	13 <sup>6</sup> <sub>10</sub>	21 <sup>8</sup> <sub>10</sub>	*8 <sup>2</sup> <sub>10</sub>	

\* The decrease in Mortality is best shown by the calculation that had the Mortality continued at the same rate as before 1836 the deaths in 1844 and 1845 would have been ..... 1,140  
Whereas they were only ..... 711  
Saving of life..... 429



Tropical, or Unhealthy Climates.

	Average Strength of Garrison.	Mortality.			Ratio of Deaths Annually per 1000 of Strength.	Ratio Antecedent to 1836 by Statistical Reports.	Difference in the Mortality of these two Periods.	
		Deaths in 1844.	Deaths in 1845.	Total Deaths in Two Years.			Decrease.	Increase.
Mauritius .....	1,748	41	37	78	22 <sup>3</sup> / <sub>10</sub>	30 <sup>1</sup> / <sub>10</sub>	7 <sup>8</sup> / <sub>10</sub>	
Jamaica .....	1,267	47	28	75	29 <sup>7</sup> / <sub>10</sub>	128 <sup>6</sup> / <sub>10</sub>	98 <sup>9</sup> / <sub>10</sub>	
West India Islands ....	2,877	171	167	338	59 <sup>1</sup> / <sub>10</sub>	82 <sup>5</sup> / <sub>10</sub>	23 <sup>4</sup> / <sub>10</sub>	
Ceylon .....	1,302	57	58	115	44 <sup>2</sup> / <sub>10</sub>	75	30 <sup>3</sup> / <sub>10</sub>	
	7,194	316	290	606	42 <sup>1</sup> / <sub>10</sub>	84 <sup>2</sup> / <sub>10</sub>	*42 <sup>1</sup> / <sub>10</sub>	

\* This decrease in Mortality may be illustrated by the fact that had the rate continued the same as before 1836 the number of deaths in 1844 and 1845 would have been ..... 1,212  
Whereas they were only ..... 606

Saving of life ..... 606

Adding this to the previous result it would appear that in these two years alone there has been a saving of life equal to 1,035 men, or nearly a battalion annually.

The sanitary details of the British army may now be comprised in a very narrow compass, and will admit of but little amelioration, at least so far as regards service in the colonies. The whole force, including those serving in the East Indies and colonial corps, may be taken in round numbers at 100,000 men. Of these 66,000 are serving at home, where the mortality is only from 14 to 15 per 1000 annually; 26,000 are serving in healthy colonies, where the mortality is even lower than at home. Above 4000 are serving in the Mauritius, Jamaica, and Barbadoes, where the mortality is only between 20 and 30 per 1000 annually, and the number in colonies where the mortality exceeds the latter average is under 3000 men. In this comparison Hong Kong has been left out of view, as it formed no part of the British dominions in 1836. The following statement of the mortality at that station for a period of four years may, however, prove interesting in connexion with this subject.

Year.	Strength.	Deaths.	Ratio of Mortality per 1000 of Strength.
1842	711	228	320
1843	845	344	407
1844	949	276	291
1845	1,000	154	154
Total.....	3,505	1,002	285

Arrangements being now in progress for having the duty performed by Malays in that colony, instead of Europeans, it may be expected that no further necessity will exist, after the present year, for so great an expenditure of life.

The principal mortality in the British army of late years has arisen from service in the East Indies, of which the following details for two years will serve as an illustration :—

	Strength.	Deaths.
Bombay, 1845.....	6,324	824
„ 1846.....	4,710	337
Madras, 1845.....	7,850	276
„ 1846.....	7,535	351
Bengal, 1844.....	11,003	1,028
„ 1845.....	11,280	984
	48,702	3,800
Average ..... <sup>2</sup>	2,435	1,900

or 78 per 1000 of the mean strength annually.

As regards British troops in the East Indies, however, it must be borne in mind that the military authorities in this country exercise no control over the selection of stations, the nature and extent of accommodation, the frequency of reliefs, or any of the other contingencies by which health and efficiency are likely to be affected; nor have they the means of carrying into effect any of those sanitary arrangements which have proved so successful in the colonies; but much might, no doubt, be done towards reducing the mortality, were arrangements made, as in Jamaica, for removing them to barracks on the elevated table lands in each of the Indian provinces. Political considerations and the warfare in which we have of late years been engaged in the East may hitherto have prevented any improvements of that nature, but now that peace is re-established, and the movement of troops from the hill-stations to the plains is likely to be facilitated by the introduction of railways, it does appear practicable to make many important changes in regard to military stations, which would effect a vast saving of human life. A considerable outlay must, of course, be incurred at first in the formation of new stations, but that would be more than covered by the increased efficiency of the troops, and the diminished cost of replacing, invaliding, and pensioning them.

The preceding tables apply entirely to European troops serving abroad. It may now prove interesting to extend a similar course of observations to the influence of the same climates on the mortality of Native, or black troops, during the same periods. Of these I shall first advert to the Malta Fencibles, composed of persons born in the island.

The strength of this corps and the deaths in the two years antecedent to 31st March, 1846, were as follows :—

	Strength.	Deaths.
Year ending 31st March, 1845 .....	575	5
„ „ 1846 .....	574	5



being at the rate of  $8\frac{7}{10}$  per 1000 on the average of these two years, while the average from 1825, when this corps was raised, till 1836, a period of eleven years, was 9 per 1000 annually. Thus this corps has proved one of the healthiest in the service; and as, in the case of other troops serving in the colonies, its health and efficiency seem to be on the increase.

The Cape Corps, composed of Hottentots, shows, however, a still lower degree of mortality during the same period; the strength and deaths for these two years having been respectively as follows:—

	Strength.	Deaths.
Year ending 31st March, 1845.....	420 .....	3
"      "      1846.....	448 .....	3
Average of these two years.....	434	3

being at the rate of 7 per 1000 annually. While the mortality in the same corps on the average of the thirteen years antecedent to 1836 was 12 per 1000 annually, thus showing a great reduction of late years.

The ratio of mortality in both those corps has been much below what is usual even among the most select lives in this country, and shows the great advantage, wherever it is practicable, of employing the native inhabitants of our colonies, as a defensive force, in preference to regular troops sent from this country. There are, I am well aware, many political considerations which must be kept in view in a matter of this kind, but at present I am merely adverting to the question as one of health.

On comparing the diet and habits of the men composing these two corps, (which exhibit so low a degree of mortality during a long series of years,) they will be found diametrically opposite; the Maltese soldier living principally on vegetable diet, and rarely indulging in the use of fermented or spirituous liquors, while the Hottentot soldier, like others of his race, lives principally on animal food, and that of the coarsest description. Owing to the want of rain and the uncertainty of the crops, grain is often very scarce on the Eastern frontier of the Cape, where this class of troops is principally employed, and they are occasionally without vegetable or farinaceous food for several weeks, at which times they often consume from 2 to 3 lbs. of meat daily; and their usual meat ration is at all times as great as that of the European soldier. Intoxication with ardent and fermented spirits, or by smoking large quantities of a coarse description of hemp, is also by no means uncommon among them, yet has this corps proved as healthy as the Maltese Fencibles, and even still more so than the Native army of the East Indies, whose comparative exemption from disease has, by some, been attributed to the simplicity of their diet and their general abstinence from every species of intoxication. Facts such as these show with what caution deductions should be drawn when the returns of only one class of men are before us, and how necessary it is, in this, as in every other species of statistical inquiry, to extend the sphere of observation with a view to accurate results.

I shall next advert to a class of troops who, though born within the tropics, and serving in tropical colonies, are not natives of the climate in which they are stationed. First of these in number and importance are the three West India corps, recruited principally from

negroes captured in slave ships, or inhabitants of the West coast of Africa. These men are distributed throughout Jamaica and the West India Islands, and take the duty at those stations which long experience has shown to be inimical to the health of Europeans.

The strength and mortality of this class for the same two years as were before referred to has been as follows:—

JAMAICA.		
	Strength.	Deaths.
Year ending 31st March, 1845.....	770 .....	17
"      "      1846.....	912 .....	36
Average of these two years.....		26½
WEST INDIES.		
	Strength.	Deaths.
Year ending 31st March, 1845.....	994 .....	23
"      "      1846.....	1,175 .....	32
Average of these two years.....		27½

These troops being frequently removed from island to island there would be no utility in stating the separate mortality in each, as in most instances the calculation would involve broken periods of a year; but on the whole it appears that in Jamaica the mortality has been at the rate of about 31, and in the West Indies 26, per 1000 of the force annually, while the mortality of the same class of troops at the same stations during the twenty years antecedent to 1836 was respectively 30 per 1000 in Jamaica and 40 per 1000 in the West Indies, thus showing a marked reduction in the mortality at the latter during the last two years.

On referring to the preceding results, a very material difference will be found between the mortality of this class of troops and that of the Cape Corps and Maltese Fencibles, who are serving in their native climate, the former being nearly four times as high as either of the latter. Though the climate of the West Indies is probably as warm as that of the interior of Africa, whence the negroes are generally drawn, yet their constitutions never have, and probably never will, become assimilated to it. The high rate of mortality among them can in no respect be attributed either to the habits or the duties of the negro soldier, for others of the same race who are not in the army suffer in a corresponding proportion.

By a very extensive investigation, into which I entered when engaged in the preparation of the West India Statistical Report, about seven years ago, I found that the mortality among the negro slave population, even including families who had been for several generations in these colonies, amounted to about 30 per 1000 annually of all ages. Very little of this mortality occurred among infant life, it fell principally on persons of mature age, among which class it was nearly double the proportion usually observed among the civil population in this country. That under such a mortality the negro race can ever increase, or even keep up their numbers in the West Indies, appears a physical impossibility; and there is good reason to believe that the want of labour so much complained of, and the demand for immigration from other countries, so much insisted on by planters, as essential



to the prosperity of the colony, arises more from this waste of life than from the increasing cultivation of the soil, and that a careful investigation into the mortality of the negro population at different ages, would show that the period is not far distant at which that race would become entirely extinct in the West Indies but for the occasional accession to their numbers by fresh importations.

The results on which these observations, as to the mortality of the negro population were founded, extended, it is true, over a period when slavery prevailed in the island; and it would be interesting to those philanthropists who then attributed the high rate of mortality to that cause, now to trace from the returns of each island whether any diminution has taken place since freedom was established among our sable brethren; but when it is shown by these results that negro soldiers in the prime of life, with every advantage in point of income, clothing, comfort, and medical attendance which the British soldier enjoys, with precisely the same diet, (if that can be considered an advantage,) and with much greater regularity of habits than he can boast of, are subject to an annual mortality of from  $2\frac{1}{2}$  to  $3\frac{1}{2}$  per cent., there is little reason to hope that, whether bond or free, the negro race will ever thrive or increase in the West Indies.

The same remarks, as regards the unsuitableness of the climate, will, in a great measure, apply to the next class of troops to which I have to advert, viz., the Ceylon Rifle Regiment, composed of Malays, brought principally from the Straits of Malacca for the purpose of serving in Ceylon, where the climate, though equally warm, does not appear by any means congenial to their constitution, as must be apparent from the following results regarding the mortality:—

	Strength.	Deaths.
Year ending 31st March, 1845.....	1,952 .....	46
"      "      1846.....	1,930 .....	36
	<hr/>	<hr/>
Average of these two years.....	1,941	41

making an annual mortality of 21 per 1000, while the ratio among the same class of troops for the twenty years antecedent to 1836 was 27 per 1000 annually.

Though this mortality is considerably lower than that of the negro troops in the West Indies, it is nearly twice as high as that which occurs among the Native troops serving on the continent of India adjacent,—a sufficient proof that the Malay race is never likely to become assimilated to the climate of Ceylon; indeed, it has long been a subject of remark that though their children have been encouraged to enter the service at a very early age, in order to recruit the force, that expedient has proved insufficient without the constant importation of recruits from the Malay coast.

The mortality among this class of troops, as among every other to which I have adverted, has undergone a considerable reduction within the last two years as compared with the twenty years antecedent to 1836, owing, no doubt, to late improvements and ameliorations in the condition of the soldier; but there is little hope, either in the case of the Malay or the Negro, that this reduction will be sufficiently progressive to hold out a reasonable prospect of these races becoming

thoroughly assimilated either to the climate of Ceylon in the one case, or to that of the West Indies in the other.

To ascertain the races of men best fitted to inhabit and develop the resources of different colonies is a most important inquiry, and one which has hitherto attracted too little attention, both in this and other countries. Had the Government of France, for instance, adverted to the absolute impossibility of any population increasing or keeping up its numbers under an annual mortality of 7 per cent. (being that to which their settlers are exposed at Algiers), it would never have entered on the wild speculation of cultivating the soil of Africa by Europeans, nor have wasted a hundred millions sterling with no other result than the loss of 100,000 men who have fallen victims to the climate of that country. In such questions military returns, properly organized and properly digested, afford one of the most useful guides to direct the policy of the colonial legislator; they point out the limits intended by Nature for particular races, and within which alone they can thrive and increase. They serve to indicate to the restless wanderers of our race the boundaries which neither the pursuit of wealth nor the dreams of ambition should induce them to pass, and proclaim in forcible language that man, like the elements, is controlled by a Power which hath said, "Hither shalt thou come, but no further."

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*Statistics of the Sanitary Condition of the Borough of Reading.* By  
JOHN BILLING, Esq., F.S.S., *Architect.*

[Read before the Statistical Society of London, 15th February, 1847.]

THE structural arrangements of a town appear to constitute its sanitary condition, more than the circumstances attendant upon its locality. With but few exceptions, nature has made every site which is adapted for the occupations of mankind in towns, also eligible for the health and longevity of the inhabitants. Indeed, it is admitted that towns may be equally healthy with rural districts, and that the arrangements necessary to secure that condition are attained more economically in the former than in the latter.

That the comparative health of towns is dependent mainly upon the draining and paving has been fully proved. All the investigations which have been made have established the fact of their strict correspondence.

It is therefore important in ascertaining the causes of disease and mortality, and in adopting means for their removal, to classify the facts in a tangible form. The circumstances in which the town of Reading has lately been placed, have afforded me an opportunity of investigating and arranging these details. The Corporation of Reading having received from medical practitioners and others assurances that much of the excess of illness and mortality which occurred in the town in the autumn of 1846, was due to defective drainage, instituted a rigid inquiry into the causes which were stated to exist, with a view to obtaining a legislative enactment for their removal. I was directed to make a statistical inquiry into the sanitary condition of the borough, and upon the completion of that inquiry an elaborate work was the result, of which the subjoined Tables are summaries.



Each *House* in the borough was inspected, and its peculiarities arranged in Tables, of which the Form No. 3 affords a specimen. Instead of "Title of Parish," was substituted "Name of Occupier," and "Description of Property."

The Form No. 2 is for "*Courts*;" the Form No. 3 being added to embrace the Houses in Courts, and "Title of Court" being substituted for "Title of Parish."

The Form No. 1 contains the whole of the preceding information, with the addition of that which applies exclusively to "*Streets*," substituting "Title of Street" for "Title of Parish."

The Table entire is the Summary of the whole Borough.

It will be observed that each House, Court, and Street, is thus separately defined and located.

The whole Book, with the separate Summaries of each Court and Street, and the Index, comprises 330 pages.

*Summary of the Borough.*

FORM NO. 1.—STREETS.					
Title of Parish.	No. of Houses.	Length.	Width.	Length of Main Drain.	Number of Open Gratings.
		Feet.	Feet.	Feet.	
St. Giles.....	1,448	28,033	..	5,820	31
St. Mary .....	1,863	23,002	..	3,610	43
St. Lawrence .....	844	8,517	..	4,498	37
Total of Streets, &c., in the Borough....	4,155	59,552	40 Average.	13,928	111

FORM NO. 2.—COURTS.									
Title of Parish.	No. of Streets	ENTRANCE.			DRAINAGE.				
		One only.	Open from Ground upwards.	Under House.	To Cesspools.	To Covered Drains.	To Surface Gutters.	None.	Badly Paved and Stagnant Refuse.
St. Giles.....	42	35	16	27	7	9	16	10	7
St. Mary .....	60	48	42	18	12	6	25	13	16
St. Lawrence .....	27	26	4	23	2	5	15	5	11
Total of Courts, &c., in the Borough....	129	109	62	68	21	20	56	28	34

Title of Parish.	HOUSES.			INHABITANTS.			
	Occupied.	Void.	Rooms.	Families.	Males.	Females.	Total.
St. Giles.....	230	38	711	241	507	547	1,054
St. Mary .....	460	39	1,546	492	1,154	1,119	2,173
St. Lawrence .....	195	16	600	206	426	439	865
Total of Courts, &c., in the Borough....	885	93	2,857	939	2,087	2,105	4,192

Summary of the Borough—continued.

FORM NO. 3.—HOUSES.

DRAINAGE.

Title of Parish.	To Cesspools.				To Street Sewers.		To Kennett Streams.	Houses without Drainage.
	Covered from the Atmosphere.		Exposed to the Atmosphere.		To Covered Drains with Open Gratings.	To Surface Gutters, House Refuse, &c., not wholly Rain Water.		
	Water Closets.	Sculleries.	Privies	Other kinds.				
St. Giles.....	118	222	871	202	154	140	211	943
St. Mary .....	83	470	1,008	129	147	86	78	1,552
St. Lawrence .....	64	112	468	53	159	91	98	496
Total of Houses, &c., } in the Borough..... }	265	804	2,347	384	460	317	387	2,991

Title of Parish.	WATER.			VENTILATION.		Pigsties.	Slaughter Houses.
	By Cocks, on Alternate Days.	By Pump and Well.	By Rain only.	Back to Back, or without Back Windows.	Bad.		
St. Giles.....	295	435	34	153	123	171	5
St. Mary .....	748	285	56	360	184	152	7
St. Lawrence .....	357	131	23	143	166	55	7
Total of Houses, &c., in the Borough....	1,400	851	113	656	473	378	19

It was not considered necessary to ascertain the number of inhabitants, except in *Courts*. In more crowded towns other districts might also be numbered.

The labour of effecting the investigation would necessarily be great, and a considerable measure of practical experience would be requisite, in any town, to render the information accurate; but when obtained, the nature of the remedy required, the amount of paving, the size of sewers, the substitution of water-closets, the value and character of the present drainage, the alterations requisite to courts and houses for ventilation, the removal of nuisances, &c., is all highly valuable; added to which some such investigation appears absolutely necessary, when *an estimate of the expense* of any proposed structural arrangements is contemplated; almost every column in the Table being serviceable for that purpose.

A highly interesting addition might be made by arranging the actual mortality, and, if possible, the sickness also, in the several districts, in the localities as they occur in the Tables; the effects of the present arrangements, and of any future improvements, could then be accurately ascertained.



A Table showing the Revenue Receipts, Increase of Traffic, Dividends, &amp;c., on the

NAME OF LINE.	Length in Miles.	Revenue Receipts.	Increase on Gross Receipts over corre- sponding period of 1845.	Increase on Money received from Passengers, &c., separately.
		£      s.      d.	£      s.      d.	£      s.      d.
Bristol and Exeter	(76, included in length of Great Western.)	49,683    2    3	1,144   10    3	....            ....
Dublin and Drogheda	35	21,408   17    3	644   15    3	37    6    0
Eastern Counties....	161	250,056    8    9	69,956   12    6	25,493   18    5
Edinburgh and Glasgow	46	111,087   16    6	....            ....	....            ....
Glasgow, Paisley, and Greenock	22 $\frac{1}{2}$	28,982   18    3	2,479    0    0	....            ....
Glasgow, Paisley, Kilmarnock, & Ayr	51	60,645    6    6	7,000    0    0	....            ....
Great Western ....	240 $\frac{3}{4}$	513,846   15   10	....            ....	....            ....
London and Blackwall	4	34,801    6    9	3,548    4    3	....            ....
London, Brighton, and South-Coast	112	226,711    7   11	....            ....	40,367   15    0
London and North-Western	362	1,110,795    0   10	...            ....	....            ....
London and South Western	99	196,323    5    2	....            ....	....            ....
Carried forward ....	1,113 $\frac{1}{4}$	2,604,342    6    0		....            ....

Following Railways for the half-year ending in Dec., 1846. By J. WHISHAW, Esq.

Increase from Goods, Cattle, &c., separately.			Dividend declared.			Balance after paying Dividend.			Miscellaneous, including Number of Passengers, and Quantities of Goods carried, Stock of Engines, &c. &c.
£	s.	d.	£	s.	d.	£	s.	d.	
....	....	....	1	13	9	2,055	15	5	This line is leased to the Great Western at a fixed rent of 71,957 <i>l.</i> per annum, and a toll of $\frac{1}{4}$ <i>d.</i> a mile for every passenger travelling upon it, and the same for every ton of merchandise carried.
676	0	0	3	14	0	....	....	....	Compared with the corresponding half year of 1845, there is a falling off of 10,000 in the third class passengers.
44,462	14	1	10 <i>s.</i> per share			about 329 <i>%.</i>			The half year ends on the 4th of January. Increased length of road maintained during the 6 months, 59 miles. Stock of engines, 90, viz., 72 passenger and 18 goods; 65 of these are in daily work.
....	....	....	8 per cent.			12,983	2	11	The half year ends on the 31st of January. The increase in the traffic over the corresponding period of 1845, has been 26,570 <i>l.</i> 4 <i>s.</i> 10 <i>d.</i> , without any additional mileage. The dividend for the half year ending in July was 6 per cent.; 5 per cent. was the highest dividend ever previously declared. The increase of the traffic is at the rate of 30 per cent., and that in the working expenses 25 per cent.
....	....	....	6 <i>s.</i> per share on the 25 <i>%.</i> shares.			716	7	3	The half year ends on the 30th of January.
....	....	....	7 per cent.			2,095	16	6	The half year ends on the 31st of January. The increase of passengers has been 71,360. The comparative expense of working the line is greater.
....	....	....	8 per cent.			7,853	14	10	The revenue receipts include the traffic on the Bristol and Exeter part of the line. The increase of passengers carried during the half year is 92,598, with an additional trade of 23,976 tons of goods. Apparently there is no increase in the receipts. The working expenses are 38 per cent.; for the corresponding period of 1845, they were only 36 $\frac{1}{2}$ .
....	....	....	4 <i>s.</i> per share			....	....	....	Number of passengers carried, 1,782,844; amount received from them, 28,634 <i>l.</i> 14 <i>s.</i> 1 <i>d.</i> The Company intend "to change the present expensive and exclusive system of working by ropes, and adopt locomotive power." It is also intended to alter the gauge from 5 feet to 4 feet 8 $\frac{1}{2}$ inches.
8,616	11	5	7 per cent.			....	....	....	In the course of the 6 months the extent of this line has been nearly doubled. Total number of passengers carried during the half year, 1,438,856. The number of working engines on the 31st of December was 54.
68,362	0	0	10 per cent.			105,722	0	0	In the coach traffic receipts there is a decrease of 6,796 <i>l.</i> Total number of passengers carried over the line during the 6 months, 3,277,590.
....	....	....	2	2	6	200	0	0	The receipts have somewhat diminished in consequence of the reduction of passenger-rates. The working expenses for the half year are 36 $\frac{3}{4}$ per cent.
....	....	....	....			131,955	16	11	



A Table showing the Revenue Receipts, Increase

NAME OF LINE.	Length in Miles.	Revenue Receipts.			Increase on Gross Receipts over corre- sponding period of 1845.			Increase on Money received from Passengers, &c., separately.		
		£	s.	d.	£	s.	d.	£	s.	d.
Brought forward....	1,133 $\frac{1}{4}$	2,604,342	6	0	....	....		....	....	
Manchester and Leeds	117 $\frac{1}{4}$	187,524	0	0	3,388	0	0	....	....	
Manchester, Shef- field, and Lincoln- shire	49 $\frac{1}{4}$	55,277	15	5	19,875	10	3	5,999	18	0
Maryport and Car- lisle	28	15,151	9	10	....	....		....	....	
Midland .....	328 $\frac{1}{2}$	401,790	19	4	55,498	2	10	29,489	9	6
Newcastle and Car- lisle	61	57,136	5	1	9,723	6	2	3,363	14	0
Norfolk .....	58 $\frac{1}{2}$	45,689	1	2	7,158	17	6	....	....	
North British .....	72 $\frac{1}{2}$	53,281	15	5	....	....		....	....	
South Devon .....	15	15,620	5	7	....	....		....	....	
South Eastern .....	140 $\frac{1}{4}$	236,404	0	5	....	....		38,570	8	9
Ulster .....	25	18,987	2	5	....	....		....	....	
York and Newcastle	149 $\frac{1}{4}$	158,188	2	9	21,051	14	6	....	....	
York and North Midland	162 $\frac{1}{2}$	186,752	0	10	....	....		....	....	
TOTALS .....	2,340 $\frac{1}{4}$	4,036,145	4	3	....	....		....	....	

## of Traffic, Dividends, &amp;c.—continued.

Increase from Goods, Cattle, &c., separately.			Dividend declared.	Balance after paying Dividend.			Miscellaneous, including Number of Passengers, and Quantities of Goods carried, Stock of Engines, &c. &c.
£	s.	d.		£	s.	d.	
....	....	....	7 per cent.	131,955	16	11	During the 6 months the opening of the Ashton branch has tended to increase the receipts, and the opening of the Sheffield and Manchester and Leeds and Bradford Lines to diminish them. At the same time the receipts have been affected by reductions in the passenger fares. 233,515 more passengers were carried than in the corresponding period of 1845. The receipts, however, from that source, are 3,125 <i>l.</i> less.
6,593	0	0		41,124	0	0	
13,875	12	3	5 per cent.	....	....	....	The number of passengers carried was as follows, viz., 1st class, 40,191; 2nd class, 80,908; 3rd class, 539,181; 4th class, 199,648—total 859,928. The number of passenger engines at work, 25, and of goods engines, 4. During the 6 months the engines have run 315,482 miles.
....	....	....	none	....	....	....	
26,008	13	4	7 per cent.	13,040	8	1	The ordinary traffic is in excess of that for the corresponding period of 1845 by 4,868 <i>l.</i> There has been a decrease in the receipts from cat- tle of 201 <i>l.</i> 8 <i>s.</i> 10. Stock of engines, 122, in- cluding 10 new ones. Number of passengers carried, 2,000,000.
6,359	12	2	5½ per cent.	....	....	....	
....	....	....	3½ per cent. on consoli- dated stock	....	....	....	The rate of increase from passengers and goods is about 30 per cent. The working expenses have been at the rate of 48 per cent. upon the receipts.
....	....	....	5 per cent.	840	5	3	
....	....	....	none	....	....	....	The half year ends on the 31st of January. The expenses on the main line amounted to rather more than 42 per cent. on the receipts. The revenue, which includes the receipts on the branches to Dalkeith and Haddington, is for 7 months, and the dividend is upon it. The num- ber of passengers carried was 548,252.
[13,320	0	0	21 <i>s.</i> on the paid- up shares	7,454	7	3	
1,971	9	9	1 <i>l.</i> a share	1,130	7	8	The receipts are from the opening of the line to Teignmouth on the 29th of May (1846). The number of passengers carried during the period was 248,854, and the miles travelled 2,529,601.
....	....	....	9 per cent.	504	19	4	
....	....	....	10 per cent.	17,213	17	9	The half year ends on the 31st of January. The increase on the number of passengers carried over the corresponding period of 1845-6, was 187,579, exclusive of the Greenwich branch, upon which there was an increase of 7,241 persons, and of 1,113 <i>l.</i> 11 <i>s.</i> 7 <i>d.</i> in the earnings.
....	....	....	....	213,264	2	3	
....	....	....	....	....	....	....	The half year ends on the 28th of February. There is also an increase on the passenger traffic, but the amount is not stated.
....	....	....	....	....	....	....	The increase on the gross receipts includes the traffic on the Richmond Branch opened in Septem- ber. Number of passengers carried, 751,922; horses, carriages, cattle, &c., 96,346; goods, 81,767 tons; minerals, coal, &c., 448,551 tons.
....	....	....	....	....	....	....	Number of passengers carried, 638,332; tons of goods, 275,062; do. of minerals, coal, &c. 139,155.



*Summary of Savings' Banks in England, Scotland, Wales, and Ireland.*

Population in 1841, 26,787,004.

In England, Scotland, Wales, and Ireland, there were, on the 20th November, 1844, five hundred and seventy-seven Savings' Banks containing—

	Depositors.	£
Not exceeding .....£ 20	564,642	3,654,799
„ 50	258,270	7,961,483
„ 100	107,577	7,406,245
„ 150	36,381	4,384,014
„ 200	20,629	3,516,947
Exceeding..... 200	3,044	716,078
Individual Depositors ....	990,543	27,639,566
Charitable Societies .....	11,301	593,249
Friendly Societies.....	10,203	1,272,046
No. of Accounts .....	1,012,047	29,504,861
Friendly Societies in direct account with Commissioners for Reduction of National Debt	428	1,770,775
Gross Total .....	1,012,475	31,275,636

Average amount of each Depositor, £27 18s.

Since 20th November, 1844, twelve Savings' Banks have been established.

*Pauper Lunacy and Poor's Rate Statistics.*

At the present moment, when the new Lunacy Act is being brought into operation, the following notes respecting an English county of medium size will not be without interest, helping as they do to an estimate of the extent of charge entailed by a law of such beneficent design. They are abstracted from a larger table constructed by Mr. S. Thorncroft of Brighton. By the Act of last Session (8 and 9 Victoria, cap. 126) it is enacted that the justices of every county and borough which has no Pauper Lunatic Asylum shall, after the passing of the Act, either erect or provide an asylum for the pauper lunatics of such county or borough, or shall unite with some county or borough in erecting or providing an asylum for the pauper lunatics of such county or borough; and that if such justices having no such asylum shall not within three years from the passing of the Act have erected or provided, or united in erecting, or providing an asylum for the pauper lunatics thereof, it shall be lawful for one of the Principal Secretaries of State to require the justices of such county or borough to erect or provide, or unite in erecting or providing, such an asylum for the purpose aforesaid.

The first head is taken from Appendix D to the Fourth Annual Report of the Poor Law Commissioners.

The second, third, and fourth heads are taken from the Population Returns for 1841.

The fifth head is taken from the Parliamentary paper No. 557,

ordered to be printed by the House of Commons, 3rd July, 1832, entitled "County Rates."

The sixth head is taken from the Parliamentary paper, No. 63, entitled "Poors Rates," ordered to be printed 26th February, 1844.

The seventh head is taken from the Parliamentary paper No. 165, "Real Property," ordered to be printed by the House of Commons, 20th March, 1845.

The eighth, ninth, tenth, and eleventh heads are taken from the Eleventh Annual Report of the Poor Law Commissioners.

The twelfth, thirteenth, fourteenth, fifteenth, sixteenth, seventeenth, eighteenth, nineteenth, twentieth, and twenty-first from the Parliamentary paper No. 333, entitled "Pauper Lunatics," ordered to be printed 28th May, 1845.

### COUNTY OF SUSSEX.

*Totals of the Population; Inhabited Houses; Area of English Acres; the Valuation of Property to the County Rate, 1830; the Valuation of Property Assessed to the Poor's Rate, 1841; the Valuation of Real Property under the Property and Income Tax Act, Schedule A for 1843; the Expenditure for the Poor and other purposes, 1843-4; the like for the County and Police Rate, with the Number of Lunatics and Idiots chargeable to each Union, for the year 1843-4.*

Poor Law Unions.	1. No. of Parishes in each Union.	2. Population of each Union, from the Population Returns.	3. Inhabited Houses in each Union.	4. Area of English Statute Acres in each Union.	5. Valuation which the County Rate was Assessed in the Year 1830.	6. Valuation of Property Assessed to the Poor's Rate, 1841.	7. Valuation of real Property in each Parish Assessed to the Property Tax in the Year 1843.	8. Expenditure for the Relief of the Poor and other purposes, March 25, 1844.	9. Payments for the County Rate, 1844.	10. Payments for the Police Rate, 1844.	11. Total Expenditure out of the Poor's Rate for the Year ending 25th March, 1844.
					£	£	£	£	£	£	£
20 Poor Law Unions ....	274	220,716	39,795	843,720	697,492	818,448	1,202,261	124,867	14,661	1,736	141,264
3 Gilbert Unions ....	36	23,255	4,388	57,490	78,753	88,269	138,063	9,980	1,067	23	11,070
5 Parishes not in Union..	5	609	112	3,050	3,095	3,033	5,607	278	40	..	318
2 under Local Acts, &c...	12	55,173	9,746	3,660	53,471	259,480	330,835	22,835	3,281	..	26,116
Grand Total	327	299,753	54,041	907,920	832,811	1,169,230	1,676,766	157,960	19,049	1,759	178,768

Poor Law Unions.	12. Pauper Lunatics in County Asylums.	13. Pauper Lunatics in Licensed Houses.	14. Total of Pauper Lunatics in Asylums.	15. Pauper Lunatics in Workhouses.	16. Pauper Lunatics with their friends or elsewhere.	17. Total of Pauper Lunatics.	Average Weekly Cost per head of Provisions and Clothing for Pauper Lunatics.			21. Average.
							18. In County Asylums.	19. In Licensed Houses.	20. Elsewhere.	
							s. d.	s. d.	s. d.	s. d.
20 Poor Law Unions....	14	87	101	69	123	293	9 9½	9 7½	2 11½	5 2½
3 Gilbert Unions .....	..	..	..	..	..	..	..	..	..	..
5 Parishes not in Union	..	..	..	..	..	..	..	..	..	..
2 under Local Acts ....	2	20	22	8	5	35	10 5½	10 0	5 4½	8 3½
Grand Total ....	16	107	123	77	128	328	..	..	..	..



## MISCELLANEOUS.

## PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

*Fifth Ordinary Meeting, 1846-7. Monday, 15th March, 1847.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Gentlemen were elected Fellows:—

William Newmarch, Esq.		Lewis Stephens Lyne, Esq.
Thomas Longman, Esq.		

The following Paper was read:—

Vital Statistics of the East India Company's Armies in India, European and Native. By Lieut.-Col. W. H. Sykes, V.P.R.S.

*Sixth Ordinary Meeting, 1846-7. Monday, 19th April, 1847.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Minute of Council was read:—

The Fellows are at liberty to purchase the back numbers of the Journal of the Statistical Society at half the publishing price.

The following Gentlemen were elected Fellows:—

G. W. Alexander, Esq.		William Brook, Esq.
Frederick Mowatt, M.D.		Samuel Parsons, M.D.

The following Paper was read:—

Education in the Mining and Manufacturing Districts of South Staffordshire; being a Report to the Council of the Statistical Society of London. By Joseph Fletcher, Esq., Hon. Sec.

*Seventh Ordinary Meeting, 1846-7. Monday, 17th May, 1847.*

Right Hon. Holt Mackenzie, Vice-President, in the Chair.

The following Gentleman was elected a Fellow:—

Thomas Gray, Esq.

The following Papers were read:—

Historical and Statistical Account of the Markets of London. By Joseph Fletcher, Esq., Hon. Sec.

The Treatment of the Sick in the Norwegian Penitentiaries. By H. Norton Shaw, M.D.

*Eighth Ordinary Meeting, 1846-7. Monday, 21st June, 1847.*

The following Gentlemen were elected Fellows:—

P. F. Durham, Esq.		Charles Burls, Jun., Esq.
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The following Paper was read:—

On the Mortality among Her Majesty's Troops serving in the Colonies during the years 1844 and 1845. By Lieut.-Col. A. M. Tulloch, F.S.S.

*Seventeenth Annual Meeting of the British Association for the Advancement of Science, held at Oxford, 23rd—30th June, 1847. Statistical Section.*

This Section had its usual attendance of firm friends and able contributors to the advancement of social science. The following were its Officers and Committee:—

*President.*—Travers Twiss, D.C.L., F.R.S.

*Vice-Presidents.*—Sir Charles Lemon, Bart., F.R.S., Henry Hallam, Esq., F.R.S., Lieut.-Col. W. H. Sykes, V.P.R.S., G. R. Porter, Esq., F.R.S.

*Secretaries.*—Rev. W. Hayward Cox, B.D., J. T. Danson, Esq., F. G. P. Neison, Esq.

*Committee.*—Sir John P. Boileau, Bart., Sir Thomas Dyke Acland, Bart., M.P., W. Cooke Taylor, Esq., LL.D., His Excellency J. Bancroft, American Minister, James Heywood, Esq., M.P., Professor Hancock, Prof. Pol. Econ., Dublin, M. Bielke, Secretary of the Danish Legation, Professor Royle, King's College, London, M. Ricardo, Esq., W. Neild, Esq., Milne Edwards, Esq., The Lord Bishop of Norwich, Major-General John Briggs, The Master of University College, Alderman W. Thorp, Oxford, Joseph Fletcher, Esq., Hon. Sec. Stat. Soc. of London, Monckton Milnes, Esq., M.P., Professor von Mohl, of Heidelberg, Rev. G. H. Sackeverell Johnson, Queen's Col., Rev. Edmund Larken, M.A., Trinity Col., Rev. E. Wyatt Edgell, H. Norton Shaw, M.D.

The meetings of the Section were held in the Natural Philosophy School; and at their close it was proposed by Col. Sykes, and carried unanimously, that the thanks of the Section be given to the President, Dr. Twiss, and to the Local Secretary, the Rev. W. Hayward Cox, for their zealous and persevering regard to the interests of the Section and the advancement of its objects.

The following are the contributions submitted to the Section.

1. On the Resources of the Irish Sea Fisheries. By R. Valpy, Esq.
2. On the Revenue Statistics of the North-Western Provinces of British India. By Lieut.-Col. W. H. Sykes, V.P.R.S.
3. On the Results of a Scheme by Mr. Vandaleur, for Improving the Condition of Labourers, tried at Ralahine, County Clare, Ireland. By the Rev. E. G. Larkin.
4. On the Influence of Education, shown by Facts recorded in the Criminal Tables for 1845 and 1846. By G. R. Porter, Esq., F.R.S.
5. On the Want of Educational Establishments, adapted to those born with Deficient or Feeble Mental Organization.
6. On the Cotton Commerce of India. By Professor Royle.
7. On the Distribution of Races in the present Kingdom of Denmark. By M. Bielke, Secretary of the Danish Legation.
8. On Education and Crime in England and Wales. By F. G. P. Neison, Esq.
9. Analysis of the Census of New South Wales. By F. G. P. Neison, Esq.
10. On the Moral and Educational Statistics of England and Wales, with Diagrams. By Joseph Fletcher, Esq., Hon. Sec. Stat. Soc. of London.
11. On the Variations in the Supply of Silver in Ireland, during the Operations for the Relief of Distress in 1846-7. By Professor Hancock.
12. The Prices of the *Cerealia* and other Edibles of India and England, compared. By Lieut.-Col. W. H. Sykes, V.P.R.S.

The next Meeting of the British Association is to be at Swansea, on Wednesday, the 9th day of August, 1848.



# STATE OF THE PUBLIC HEALTH IN THE FIRST QUARTER OF THE YEAR 1847.

"THE Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty-six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,612,800 in 1841."

Winter appears to be the season in which it is most natural to man to die. For many years the number of deaths in England has been highest in the winter and lowest in the summer quarter. In the summer quarter of 1846 the reverse was observed; the mortality was greater than it had been in any quarter of the seven preceding years; and in the last winter quarter ending March 31, 1847, 56,105 persons died in the districts which make the returns; a number greater than has been registered in any corresponding quarter, and 6,035 above the corrected average. The deaths in the quarter in all England and Wales may be estimated at 120,000\*.

The annexed Table shows that the mortality was considerably above the average in the winter quarters (ending March 31st) of 1840, 1841, 1845, and 1847, and much below the average in the winter quarters of 1839, 1842, 1843, 1844, and 1846.

	1839	1840	1841	1842	1843	1844	1845	1846	1847
Deaths Registered in the March quarters of 9 years .....	42,410	46,376	46,967	44,903	43,748	46,136	49,949	43,850	56,105
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1839 at the rate of 1·75 per cent. annually..	43,581	44,344	45,120	45,910	46,713	47,531	48,362	49,209	50,070
UNHEALTHY SEASONS Difference above the calculated number..	..	2,032	1,847	..	..	..	1,587	..	6,035
HEALTHY SEASONS. Difference below the calculated number..	1,171	..	..	1,007	2,965	1,395	..	5,359	..

The temperature was below the average, and the severity of the weather was one cause of the increased mortality. It is, however, worthy of remark, that at Greenwich the temperature was lower in the winter quarter of 1845 when the deaths returned were 49,949, than in the past quarter of 1847, when the deaths were 56,105. An interesting account of the meteorology of the quarter will be found in page 281, drawn up with great care by Mr. Glaisher, from returns for which I have to thank several gentlemen in the country.

The Registrars in their notes ascribe the increased mortality generally to inflammation of the lungs and air tubes, to typhus, and other diseases, and the effects of cold on the aged. The high price of provisions is also mentioned.

The Registrar of the Abbey sub-district, Bath, says:—"The price of provisions has, during the quarter, been about a third above the average, and there has been a want of employment."

The Registrar of St. James, Bristol:—"The increase of deaths, on the corresponding quarter of last year, must be attributed principally to the severity of the weather during the early part of this quarter. There has been no epidemic disease in the district. The children of the poor have suffered much, and mortality has prevailed among them, in consequence of many of the men, who are very generally masons' labourers, being unemployed in the winter season, when their families be-

\* The yearly deaths in the districts from which the Quarterly Table is framed, comprise 47·11 per cent. of the deaths in all England and Wales; the proportions in the March quarter are 46·49; in the June, 45·74; in the September, 48·21: in the December, 48·16 per cent.

come destitute, and the younger children deprived of proper clothing and support, are more exposed to inflammatory complaints, particularly of the chest."

In Lincoln, north-east, it is said on the other hand, "work has been abundant in this district, and wages tolerably good." The "scarcity and dearness of provisions," and the "imperfect protection which the dwellings and clothing of the poor afford from cold," are referred to by the Registrars of Bulwell and Greasley, Basford; the "high price of provisions and the scarcity of employment," by the Registrar of Sutton, Macclesfield.

The Registrar of Little Bolton remarks that:—"The severity of the weather, and the extremely high price of provisions, have caused such a severe pressure upon the working classes, as to prevent them from obtaining anything like a sufficiency of food, which, with the absence of other comforts, has operated materially in promoting epidemics and other diseases."

The deaths in the March quarters of 1846 and 1847 were, in the district of—

Brighton .....	211 and 369	Wolstanton .....	239 and 326
The Isle of Wight .....	178 ,, 251	Birmingham .....	876 ,, 1,187
Portsea Island .....	290 ,, 430	Aston .....	265 ,, 354
Winchester .....	107 ,, 173	Leicester .....	342 ,, 442
Windsor .....	75 ,, 134	Basford .....	344 ,, 514
Oxford .....	75 ,, 122	Macclesfield.....	387 ,, 541
Bedford.....	172 ,, 279	Great Boughton (with	
Cambridge .....	139 ,, 180	Chester) .....	279 ,, 394
Devizes .....	83 ,, 162	Liverpool.....	1,934 ,, 3,068
Dorchester .....	107 ,, 178	Blackburn .....	546 ,, 786
Exeter .....	202 ,, 290	Preston .....	566 ,, 813
Plymouth .....	194 ,, 254	Prescot .....	237 ,, 481
Bath .....	388 ,, 548	Manchester .....	1,527 ,, 2,185
Bristol .....	427 ,, 545	Huddersfield .....	629 ,, 1,006
Clifton .....	376 ,, 508	Leeds and Hunslet .....	996 ,, 1,557
Stroud .....	189 ,, 339	Gateshead .....	255 ,, 330
Cheltenham .....	215 ,, 316	Tynemouth .....	318 ,, 434
Shrewsbury .....	112 ,, 165	Newcastle-on-Tyne.....	567 ,, 655
Worcester.....	153 ,, 226	Carlisle .....	248 ,, 340
Kidderminster .....	150 ,, 218	Abergavenny .....	327 ,, 450
Dudley .....	588 ,, 931	Wrexham .....	207 ,, 336
Wolverhampton .....	574 ,, 769		

The disastrous effect of the immigration of the Irish poor on the health of English towns, was dwelt on in the previous Quarterly Return. The evil increased during the winter quarter; and the deaths of Liverpool, where the mortality has always been high, were 3068, or 1134 more than in the winter quarter of 1846, and nearly 1000 above the average of ordinary seasons. The Registrars' notes, under Liverpool, Manchester, Stockport and Preston, contain some information on the subject. Notwithstanding the depressing aspect of this overflow of pauperism from a third part of the United Kingdom, left for centuries without an efficient poor-law, the authorities of the English towns, which the visitation has reached, appear to have made every provision in their power for the relief of the unfortunate people. For thousands of the Irish peasantry they have found food; for thousands, graves; and many of their officers and townsmen have fallen in the courageous discharge of the duties thrown on them,—in one sense by a natural calamity—in another by a national crime. The Registrar of the Howard Street sub-district, Liverpool, remarks that

"The return shows a very great increase in the mortality of this district, which is, without doubt, solely attributable to the many thousands of Irish paupers who have landed here within the last three months, bringing with them a malignant fever, which is here very properly called "the Irish fever;" and many hundreds of them were suffering from diarrhoea and dysentery when they arrived, which will account for so many deaths from those causes. Everything which humanity could devise and money carry out for their cases has been adopted by the Select Vestry; but so many thousands of Irish are continually pouring in, and their habits are so disgustingly filthy, that little can be done as yet to stay the great mortality amongst them. Perhaps there is not a parallel case to Liverpool for the last two months in the history of the country."

The new poor laws now passing through, or about to be proposed to Parliament, will no doubt mitigate these evils.



Fifteen thousand, two hundred, and eighty-nine deaths were registered in London during the first thirteen weeks of the year; a greater number than has been registered in any previous winter since the weekly table commenced. The district of Lewisham, and the sub-district of Hampstead, united now to the London districts, have only added 171 to the deaths. Upon the whole the health of London, like that of the rest of the country, has been below the average; and although the causes are to a certain extent accidental, and as we may hope, transitory, it is evident that the health of towns in England is at present stationary, not to say retrograding.

The English system of registration, however imperfect it may still be, has realized the expectation held out in the opening speech of the minister who introduced the measure to Parliament, in so far as "it enables the Government to acquire a general knowledge of the state of the population of the country\*." In successive Reports the births, deaths, and marriages have been compared with the population of different districts; the prevalence of diseases has been traced in various parts; and the irrefragable proofs of the high mortality in towns induced the late Government to appoint a commission of inquiry, which resulted in a bill submitted to Parliament by Lord Lincoln and Sir James Graham. A new bill for improving the health of towns has been prepared and brought in by the Viscount Morpeth, Lord John Russell, and Sir George Grey. As this bill is likely to occupy the attention of Parliament in a future Session, it may be useful to introduce here some extracts from a series of calculations, based on the census returns, and the deaths registered during the seven years 1838—44. The facts and methods of calculation will be given at length in the next Annual Report; in the meantime it will be sufficient to observe that the object of the investigation is to exhibit the mortality at different periods of life in the divisions, counties, towns, and groups of country districts into which England and Wales have been divided. From these results the duration of life can be deduced. Corrections have been made for the increase of population, deaths in hospitals, and other disturbing causes.

The mortality in Liverpool, Manchester, and some other places has been before adverted to. The subsequent Tables show the mortality of all the districts now included in the London tables of mortality. They afford ample materials for reasoning; but I shall here only direct attention to a few of the points bearing more immediately on the great question of the health of towns. London contained 1,950,000 inhabitants in the middle of the year 1841; and 342,000 deaths were registered within its limits in the septennial period, of which 1841 was the middle year. The deaths on an average were 48,857 annually. To 1000 females living at all ages 23 died, while to 1000 males living at all ages 27 died yearly. The mortality of females in the neighbouring counties, during the same seven years, was from 18 to 20; of males 19 to 21 in the 1000; the mortality of females in London was 5, of males 8 in the 1000 more than in the healthiest county. Out of an equal number of males living, there were 3 deaths in London for every 2 in the healthy counties. Out of 1000 boys under 5 years of age in Surrey, and 1000 in Sussex, 48 and 50 died annually; out of 1000 in London, 93 died annually. The mortality of children under 5 years of age is twice as great in London as in the adjacent counties, including several towns.

In	Annual Deaths at all Ages to		Annual Deaths under 5 Years of Age to	
	1000 Females Living.	1000 Males Living.	1000 Girls Living.	1000 Boys Living.
Surrey .....	18	19	41	48
Sussex .....	18	19	42	50
Hampshire .....	18	20	44	52
Kent .....	19	21	48	57
Berkshire.....	20	20	46	53
London .....	23	27	80	93

\* See Speech of Lord John Russell on bringing forward the Bill for the Registration of Births, Deaths, and Marriages.—Mirror of Parliament, p. 131, 1836.

The excess of deaths in London is not the result of climate, for the climate differs little from that of surrounding counties; and some of the London districts are not more unhealthy than many country districts. Take Lewisham, for instance, comprising Blackheath, Sydenham, Eltham, and Lewisham itself. The annual mortality of females was 16; of males 18 in 1000.

The actual deaths registered in London during the 7 years 1838–44 were 342,000

If the mortality during the period had not been greater than in Lewis-

ham, the deaths in London would have been about ..... 244,128

Excess of deaths in London ..... 97,872

Here are 97,000 deaths in 7 years from causes peculiar to London. Other districts may be taken in the place of Lewisham, but the result would be the same.

A considerable part of the population of London is recruited from the country, immigrants entering chiefly at the ages 15 to 35, in a state of good health. The sick and weakly probably remain at home; many of the new-comers too, unmarried, when attacked in London by slow consumption, the most fatal disease at the ages 15 to 35, return to their father's house to die; so that the mortality of the great city is made to appear in the returns lower at those ages than it is. If we take children under 5 years of age, where neither these disturbing causes nor occupation interfere, the deleterious influence on health, of London in its present state, will appear undisguised in all its magnitude.

The deaths registered in London (1838–44) under 5 years of age were 139,593

The deaths, if the mortality had not been higher than in Lewisham,

would have been ..... 80,632

Excess of deaths in London among children ..... 58,961

Here are more than 58,000 children destroyed in London within 7 of the last 10 years.

In these plain and appalling facts, in the detailed statements that follow of the mortality at each age of life in the several districts, or in the circumstances of the several parts of the population, it is difficult to discover any valid reasons for excluding London from the operation of the measure of Her Majesty's Government for "improving the Health of Towns in England."

There are, however, circumstances peculiar to the metropolis, which present difficulties, and which must be taken into account. The Health of Towns Bill—with the Improvement Clauses—proposes to enable the mayor, aldermen, and burgesses of corporate towns to prepare plans and maps of their respective jurisdictions; to lay out, pave, improve, cleanse streets; provide market-places and slaughter-houses; remove nuisances and dangerous buildings: regulate lodging-houses; secure the ventilation of public buildings; prevent smoke and extinguish fires; lay down sewers and drain houses; procure supplies of pure water and artificial light. It proposes to give the same powers to town commissioners, two-thirds of whom are to be elected by the rate-payers—one-third to be appointed by Her Majesty—in unincorporated towns. It provides the constituted authorities with qualified officers. The town councils or town commissioners are to appoint surveyors. The First Commissioner of Her Majesty's Woods and Forests, and three others, are to be "The Commissioners of Health and Public Works" to carry out the Bill—appoint Officers of Health, Inspectors, Auditors, to advise, and to aid the local authorities. The Bill gives the "Commissioners of Health and Public Works" power to enforce few or no improvements; they can only suggest them; nothing can be done without their knowledge; some things require their approval. The peculiarity of London consists in this, that of its 1,950,000 inhabitants, in 1841, dwelling in 263,000 houses, valued at a rental of nearly £8,000,000, and standing on 115 square miles of land—only 129,201 men, women, and children, dwelling in 16,264 houses, valued at £825,033, standing on an area of less than a single square mile north of the Thames—have the advantage of Municipal Institutions. The rest of the metropolis is governed by innumerable Vestries, Paving Boards, Sewers' Commissions, Water Companies, Gas Companies, and other bodies, which escape observation, and, to a certain extent, responsibility. The Commissioners appointed to inquire into Municipal Corporations in 1837, reported that, in 1831, the assessed taxes paid by the city were £205,476, by the rest of the metropolis included in the Parliamentary Boroughs, £1,022,131. "With respect," they say, "to the nature of the population, it is well known that, on the one hand, the City contains by far the most active commercial



district of the metropolis, and that it forms the northern bank of the highest part of the Thames accessible to large vessels; and, on the other, that it does not contain either of the Courts of Law, the Houses of Parliament, or Government Offices, or generally speaking, the residences of the higher or more opulent classes." The "Corporation Reform Act," in other cities brought all the parts that would popularly be termed the town, within the scope of the municipal authority. Having "pointed out how small a proportion of the metropolis is comprehended within the municipal boundary," they profess themselves "unable to discover any circumstances justifying the present distinction of this particular district from the rest, except that in fact it is, and had long been so distinguished\*." The Health of Towns' Bill, without raising the question of Municipal Reform, proposes to deal tenderly, but impartially with London; it leaves the City in possession of all its privileges, and will apparently give to it the same powers under the Act, and subject it to the same inspection as the Reformed Municipal Corporations; while the rest of the metropolis is to be dealt with on the same general principle as unincorporated towns, the Act being put in execution by "Town Commissioners," "possessed of real or personal estates to the amount of £5000, or rated to the relief of the poor upon the annual value of not less than £50, of whom one-third shall be from time to time appointed by Her Majesty, and the remaining two-thirds shall be elected by the rate-payers of the several parishes or places included within such district." Such is a brief outline of the important measure which has been proposed by Her Majesty's Government to improve the Health of London, as well as of the other Towns of the Kingdom, and so to put a stop if possible to the sickness, suffering, and dreadful loss of life brought to light by the Registration Returns.

Without going more into detail, contending that the details admit of no improvement, or being sanguine enough to imagine that the Municipal Authorities will carry out as rapidly as could be desired the plans for the improvement of the health of the town population—it must be admitted that, on the whole, the Health of Towns' Bill is an excellent measure, and well calculated to diminish the evils which have been discovered, and of which the effects have been recorded in these periodical returns. It is no innovation on the institutions of the country, and rests on no newfangled doctrines. It extends the rule of a Cabinet Minister from "possessions" which Mr. Burke declared "fitter for the care of a frugal land steward than of an office in the state†," to the domain of National Health, which has always held the first place in the meditations of Legislators; it concentrates offices that ought not to be separated in the hands of the municipal authorities, still maintained in close connexion (as they always have been) with the Crown; it seeks to secure water, pure air, and a little sunshine, for the inhabitants of cities—now so large, active, and important a part of the population—and to extend to the house and street of the tradesman, artisan, and labourer, a share of the advantages which elsewhere are the boon of nature, by the use of means which have been suggested by science, and sanctioned by long experience.

A brief sketch of the Health of Towns' question will show that it is not based on new, but on well established doctrines. The influence on health, of exercise, food, and temperature, which is modified by clothing, firing, and lodging—is universally known. The command over these necessities of life depends on the freedom, industry, and commerce of a country; protection against fatal privation is afforded by the laws. The equal importance of air, water, and locality, was perceived by Hippocrates, who wrote his celebrated treatise on these topics four or five centuries before the Christian era. The exposition of a city to the rays of the rising or setting sun—to the north or the south; the qualities of the waters used by the inhabitants; and the nature of the soil and climate produced effects on the character, diseases, and institutions, which he observed and described. In Scythia and Egypt, Greece and Asia, man was not then the same; in general, the "form and disposition corresponded with the nature of the place." This doctrine, illustrated by Cicero‡, exaggerated by Montesquieu, has prevailed down to the present day; and

\* See Extract from the Commissioners' Report, page 14.

† Burke's Speech on Economical Reform.

‡ See the Oration *contra RULLUM*, on the Agrarian Law: "Non ingenerantur hominibus mores tam a stirpe generis, ac seminis, quam ex iis rebus, quæ ab ipsa natura loci, et a vitæ consuetudine suppeditantur; quibus alimur, et vivimus." Instancing the Carthaginians and Ligurians he adds: "Campani semper superbi boni-

one of the latest physiologists treating of "domestication," after having shown how the varieties of species of animals arise in the tame, and disappear again in the wild state, observes that, "the modifiers of the human race, as well as of domestic animals, are always local circumstances, habitation, kind of life, diet; the first effects being variations in size and colour, and then in the proportion and form of organs\*."

The influence of these elements on health, and of the others with which the sanatory measure deals, was emphatically stated sixty years ago by Dr. Price, no mere theorist in this matter, but the scientific founder of the Equitable Insurance Society. After showing, from a comparison of the duration of life, in London and Holy Cross, Stockholm and Sweden, Manchester and the parts around, that human life is shorter by almost one-half in cities than in the country, he adds:—

"From this comparison it appears with how much truth great cities have been called the graves of mankind. It must also convince all who consider it, that, according to the observation at the end of the Second Essay, it is by no means strictly proper to consider our diseases as the original intention of nature. They are, without doubt, in general, our own creation. Were there a country where the inhabitants led lives entirely natural and virtuous, few of them would die without measuring out the whole period of the present existence allotted them; and death would come upon them like a sleep, in consequence of no other cause than gradual and unavoidable decay. Let us then, instead of charging our Maker with our miseries, learn more to accuse and reproach ourselves.

"The reasons of the baleful influence of great towns, as it has been now exhibited, are plainly—First, the irregular modes of life, the luxuries, debaucheries, and pernicious customs, which prevail more in towns than in the country. Secondly, the foulness of the air in towns, occasioned by uncleanness, smoke, the perspiration and breath of the inhabitants, and putrid streams from drains, churchyards, kennels, and common sewers†."

This induction, drawn with great sagacity from a limited number of facts, gradually acquired strength; the experiments in prisons and the navy confirmed it; Mr. Milne after Dr. Price demonstrated the high mortality of towns, and of marsh lands; and Mr. Edmonds in the *Lancet*, proved from the census and the returns, imperfect as they were, of the parish registers for six towns of England, for London and the several counties, as well as from correct returns for Glasgow, that the mortality at all ages, was from about 2·8 to 3·0 per cent. in towns—nearly 2·1 per cent. in all England, and as low as 1·7 or 1·8 in some counties. Mr. Edmonds also showed, that the mortality bears a certain relation to sickness at each age. For every annual death, two persons are constantly suffering from sickness, of a severity that disables labouring men from work. According to Mr. Neison's recent observations, there are 2·5 constantly sick in Friendly Societies to one death under 60; the recorded sickness after 60 is greater; the sickness in infancy is unknown. But if we assume that 2·5 are sick to one death—and this proportion certainly does not include slight illness, or all for which people take physic—the numbers constantly sick in London were 122,000, and the annual attacks of sickness more than 1,220,000, during the seven years 1838–44; the number of annual attacks would have been at least 350,000 less, and the number constantly sick would have been 35,000 less, if the health of London had been as good even as that of Lewisham, one of the districts within its own limits. This view, and all the principal facts known in connexion with the public health of England, were discussed in the article *Vital Statistics*, of M'Culloch's *Statistical Account of the British Empire*, which appeared in 1837. The cholera epidemic, followed by an influenza in 1837, more fatal than cholera, and an epidemic of typhus, had drawn attention to the state of public health; the Registration Bill was brought into operation; Dr. Arnott, Dr. Kay (now Kay Shuttleworth), and Dr. Southwood Smith, were appointed by the Poor Law Commissioners to inquire into the causes of fever in parts of London in 1838; Mr. Chadwick conducted an inquiry into the health of many towns of the kingdom in 1839; subsequently, a Committee of the House of Commons, of which Mr. Slaney was chairman, collected evidence and drew up a report in 1840; and in 1843, a Royal Commission was

tate agrorum, et fructuum magnitudine, urbis [Capuæ] salubritate, descriptione, pulchritudine," &c.

\* Prices's Works, by Morgan, 7th ed. vol. ii. p. 129.

† Geoffroy, Saint Hilaire, *Art.* "Domestication," in the *Encyclopédie Nouvelle*, Paris, 1838.



appointed to inquire into the whole subject. The reports of the Commission\* appeared in 1844 and 1845.

In the first annual report from this office, in 1839, the mortality in 32 districts of London was calculated, and it was shown that, in 1837, the mortality increased from 18, in the healthiest districts, to 32 and 39 in the crowded poor districts; and as wages are better, and the food more substantial in London, than are enjoyed by the families of agricultural labourers, the source of the high mortality in cities was traced to the insalubrity of the atmosphere, the causes of which were enumerated†. The six reports which followed contained more information on the subject; and in connexion with the Census, fully established the early opinions of the influence of air, water, and locality on health—and the principle “that the mortality has a tendency to increase as the population increases, but that the unhealthful tendency can be counteracted by artificial agencies; in other terms, that the mortality of cities in England is high, but that it may be immeasurably reduced.‡” Some room for doubt, however, existed, as the calculations in the earlier reports relative to London were partly derived from the Census returns of 1831; as the deaths were known only for a few years; and as the mortality at different ages could not be calculated, the ages of the living in London having been unfortunately not ascertained at the Census of 1831. All doubt must, however, be dissipated by the present complete series of facts, which embrace all the elements required in statistics to determine the mortality and the duration of life. Instead of the inhabitants of London “measuring out the whole period of the present existence allotted them,” it is found that, in 7 years, 139,593 perished in infancy (under 5 years of age); 40,828 in youth (5 to 25); 109,126 in manhood (25—65), and that only 52,453 attained the age of 65 and upwards. Instead of “death coming upon them like a sleep,” when the faculties are dulled by age and slow decay, it convulses tender infancy, falls with burning fevers upon man in his prime, snatches away the mother with the babe still upon her breast. But not to take an extreme view, nor to be too sanguine—and above all, to avoid any exaggeration—let us set down here the deaths in London and the deaths which would have happened at different ages if the mortality had not been higher than it was in Lewisham, where any one who will take the trouble may ascertain that many obvious and easily removed causes of insalubrity still exist.

Age.		Deaths in London.		Deaths that would have happened if the mortality had been the same as in Lewisham.		Excess of deaths in 7 years by causes peculiar to London
0 — 5	....	139,593	....	80,632	....	58,961
5 — 25	....	40,828	....	35,706	....	5,122
25 — 65	....	109,126	....	83,447	....	25,679
65 and upwards	....	52,453	....	44,343	....	8,110
All ages .....		342,000		244,128		97,872

Such is the excess of mortality. The excess of sickness must have been still greater.

At the two or three meetings held to oppose the Government Bill for improving the Health of Towns, by bodies holding local trusts, no reference was made to the loss of life constantly going on in London. It appears to have been unknown to the speakers, or to have been taken for granted, because the mortality is little more than half as high in the present as it was in the 17th century, that the health of the metropolis is perfect; that plague having been expelled, typhus and consumption may be tolerated. Now the plain fact is, that one day with another 134 persons die daily in London; that the great majority are untimely deaths,—children, fathers, mothers, in the prime of life; and that at least thirty-eight die daily in excess of the rate of mortality which actually prevails in the immediate neighbourhood. Thirty-eight persons are destroyed every day in London by ascertained causes. If these deaths took place on London Bridge or Newgate, would any sensible man in the City oppose any reasonable measure devised by a Minister of the Crown, to put a stop to the

\* The Commissioners were:—The Duke of Buccleuch; Lord Lincoln; R. A. Slaney, Esq.; George Graham, Esq.; Sir H. T. De La Beche; Dr. Lyon Playfair; Dr. D. B. Reid; Richard Owen, Esq.; Capt. W. Denison, R.E.; J. R. Martin, Esq.; James Smith, Esq.; Robert Stephenson, Esq.; W. Cubitt, Esq.

† Reg.-Gen., 1st Rep., pp. 1, 108—117.

‡ Reg. Gen., 1st Report, 8vo. page 113.

frightful sacrifice of life? The City has consented to see Newgate partly free from fever—inspected by an officer of the Crown. Why is the disease cast out of criminals to be allowed to enter and destroy the labouring multitudes? Are their lives of less value? But the City itself, it is said, is as healthy "as it can be; the authorities have done everything that can be done. A minister of health can suggest nothing which the City of London has not already accomplished. Has the Lord Mayor ascertained this by personal inspection? He has the conservancy of the swans and fish of the Thames: and so weighty has this duty been held that the first magistrate attended by the civic authorities proceeds periodically to hold courts of inspection and to ascertain the condition of these creatures. If some time after having been

"To Thames's bank which fragrant breezes fill,"

and seen the white swans on the river, and the fishes glide through the clear waters, on landing from his barge below Temple Bar, he would place himself under the guidance of Dr. Lynch, a medical officer, and Mr. Hutchinson\*, a surgeon and registrar of the city, they could lead the procession on the way to Newgate, Smithfield Market, Houndsditch, and the Tower, through alleys and lanes, and up courts inhabited by citizens of London, presenting a far different aspect: they would pass through streets on which the sun rarely shines, houses saturated with pestilential vapours—and breezes fanning sewers and excremental matter—the most fatal field of fever in the metropolis. They would see disease gleaming in the eyes of children, wasting the bodies of women, prostrating the strength of men. If they called for the registers of deaths for the City without the walls, they would find in them 13,631 names enrolled in seven years—five thousand of which would have had no place there if the "deliberate conviction" of the Commission of Sewers were well founded, that the "City of London for health, cleanliness, effective drainage, lighting, and for supply of water to its inhabitants, cannot be surpassed."

I have arranged the thirty-six districts of the metropolis in the relative order of their insalubrity: the City of London within the walls stands ninth in the list, while the City of London without the walls (the East and West London districts) stands with Whitechapel, the last, the unhealthiest of the thirty-six. That Table displays results in many respects remarkable. If the short time which has elapsed since the calculations were completed had permitted it, I should have endeavoured to represent the different degrees of mortality in the districts of London, pictured to the eye on a shaded map. A general idea, however, may be formed of the distribution of the poison which causes death. According to latest researches, it is not a gas, but a sort of atmosphere of organic particles, undergoing incessant transformations; perhaps like malaria not odorous, although evolved at the same time as putrid smells; suspended like dust, an aroma, vesicular water in the air, but invisible†. If it were for a moment to become visible, and the eye could see it from a central eminence such as St. Paul's, the disease-mist would be found to lie dimly over Eltham, Dulwich, Norwood, Clapham, Battersea, Hampstead, and Hackney; growing thicker round Newington, Lambeth, Marylebone, Pancras, Stepney; dark over Westminster, Rotherhithe, Bermondsey, Southwark; and black over Whitechapel and the City of London without the walls. The district of St. Giles would be a dark spot in the midst of surrounding districts; St. George, Hanover-square, and St. James in Westminster, would be lighter than Marylebone, and St. Martin-in-the-Fields; part of the City of London within the walls would present a deep contrast to the City without the walls. This disease-mist, arising from the breath of two millions of people, from open sewers and cesspools, graves and slaughter-houses, is continually kept up and undergoing changes; in one season it is pervaded by cholera, in another by influenza; at one time it bears small-pox, measles, scarlatina, and whooping-cough among young children; at another it carries fever on its wings. Like an angel of death it has thus hovered for centuries over London. But it may be driven away by Legislation. If this generation has not the power to call the dead up from their graves, it can close thousands of graves now openinig. The poisonous vapour may yet clear away from London, and from all the other towns of the kingdom:—some of the sunshine, pure water, fresh air, and health of the country, may be given to the grateful inhabitants of towns by the parting voice of the Legislature.

\* See Mr. Hutchinson's accurate account of the wretched state of parts of the West London District, 5th Annual Report, 8vo., p. 537.

† This question is fully discussed in the Appendix to the Registrar-General's Fifth Annual Report.



## MORTALITY OF THE COUNTRY.

*Quarterly Table of the Mortality in 115 of the Districts of England (including the Principal Towns), showing the Number of Deaths Registered in the Quarters ending March of the Four Years 1844-45-46-47.*

Parts of Divisions and Districts.	Popula- tion 1841.	Deaths Registered in the Quarters ending Mar. 31st.			
		Years.			
		1844.	1845.	1846.	1847.
<i>Metropolis*.</i>					
West Districts..	301,326	1,975	2,240	1,867	2,146
North Districts..	376,396	2,552	2,817	2,326	2,859
Central Districts	374,759	2,547	2,767	2,156	2,742
East Districts ..	393,247	2,975	2,976	2,503	3,420
South Districts..	502,483	3,593	3,886	3,666	4,122
Total†.....	1,948,211	13,642	14,686	12,518	15,289
<i>South Eastern Division.</i>					
Maidstone.....	32,310	218	235	141	231
Brighton.....	46,742	329	262	211	369
Isle of Wight ..	42,547	207	228	178	251
Portsea Island ..	53,036	344	388	290	430
Winchester ....	23,044	170	147	107	173
Windsor.....	20,502	123	97	75	134
Total .....	218,181	1,391	1,357	1,002	1,588
<i>South Midland Division.</i>					
St. Albans .....	17,051	109	121	74	100
Wycombe .....	34,150	239	229	218	199
Oxford.....	19,701	108	63	75	122
Northampton ..	28,103	211	249	186	206
Bedford .....	31,767	236	208	172	279
Cambridge ....	24,453	228	154	139	180
Total .....	155,225	1,131	1,024	864	1,086
<i>Eastern Division.</i>					
Colchester.....	17,790	136	117	123	128
Ipswich .....	25,254	174	124	159	197
Norwich .....	61,846	425	711	325	379
Yarmouth .....	24,031	196	165	232	148
Total .....	128,921	931	1,117	839	852
<i>South Western Division.</i>					
Devizes .....	22,130	148	156	83	162
Dorchester.....	23,380	166	123	107	178
Exeter.....	31,333	262	208	202	290
St. Thomas ....	47,105	249	230	226	274
Plymouth .....	36,527	269	261	194	254
Redruth .....	48,062	271	268	220	252
Penzance .....	50,100	239	235	234	290
Bath.....	69,232	507	520	388	548
Total .....	327,869	2,111	2,001	1,654	2,248
<i>Western Division.</i>					
Bristol.....	64,298	464	563	427	545
Clifton.....	66,233	424	448	376	508
Stroud.....	38,920	207	235	189	339
Cheltenham ....	40,221	228	267	215	316
Hereford.....	34,427	244	205	208	209
Shrewsbury ....	21,529	163	164	112	165
Worcester.....	27,130	214	173	153	226
Kidderminster..	29,408	242	233	150	218
Dudley.....	86,028	547	776	588	931
Walsall .....	34,274	197	260	259	292
Wolverhampton	80,722	540	649	574	769
Wolstanton ....	32,669	247	271	239	326
Birmingham....	138,187	1,118	1,275	876	1,187
Aston .....	50,928	349	353	265	354
Coventry.....	31,028	234	272	213	216
Total .....	776,002	5,418	6,144	4,844	6,601

Parts of Divisions and Districts.	Popula- tion 1841.	Deaths Registered in the Quarters ending Mar. 31st.			
		Years.			
		1844.	1845.	1846.	1847.
<i>North Midland Division.</i>					
Leicester .....	50,932	415	445	342	442
Lincoln .....	36,110	242	196	209	252
Nottingham....	53,080	385	480	293	370
Basford .....	59,634	328	349	344	514
Derby .....	35,015	266	250	282	278
Total .....	234,771	1,636	1,720	1,470	1,856
<i>North Western Division.</i>					
Stockport ....	85,672	477	721	562	642
Macclesfield ...	56,018	393	482	387	541
Great Brough- } ton (including } Chester) .....	49,085	345	365	279	394
Liverpool .....	223,054	1,996	1,815	1,934	3,068
West Derby } (adjoining } Liverpool) ..	88,652	575	668	746	891
Blackburn ....	75,091	514	642	546	786
Preston .....	77,189	506	643	566	812
Rochdale .....	60,577	479	502	560	432
Bury .....	77,496	613	558	605	790
Bolton .....	97,519	678	813	817	953
Wigan .....	66,032	641	453	538	656
Prescott .....	43,739	241	262	237	481
Chorlton .....	93,736	622	868	699	832
Manchester....	192,408	1,541	1,922	1,527	2,182
Salford .....	70,228	502	497	512	573
Ashton .....	173,964	1,245	1,685	1,413	1,460
Total .....	1,530,460	11,368	12,896	11,928	15,558
<i>York Division.</i>					
Sheffield .....	85,076	579	650	611	690
Huddersfield ..	107,140	607	699	629	1,000
Halifax .....	109,175	670	736	794	830
Bradford .....	132,164	949	1,120	1,003	1,273
Leeds&Hunslett†	168,667	1,088	1,228	996	1,551
Hull .....	41,130	327	262	309	351
York .....	47,779	272	320	336	371
Total .....	691,131	4,492	5,015	4,678	6,090
<i>Northern Division</i>					
Sunderland ....	56,226	306	335	490	400
Gateshead ....	38,747	216	252	255	330
Tynemouth....	55,625	334	303	318	450
Newcastle-on- } Tyne..... }	71,850	435	466	567	650
Carlisle .....	36,084	271	214	248	340
Cockermouth..	35,676	184	220	213	280
Kendal .....	34,694	223	219	223	270
Total .....	328,902	1,969	2,009	2,314	2,730
<i>Welsh Division.</i>					
Abergavenny ..	50,834	472	404	327	470
Pontypool ....	25,037	142	139	210	210
Merthyr Tydvil	52,864	567	568	465	510
Newtown .....	25,958	145	151	120	110
Wrexham.....	39,542	266	238	207	310
Holywell .....	40,787	253	311	293	210
Anglesey .....	38,105	202	229	207	210
Total .....	273,127	2,047	1,980	1,739	2,210
Ditto, exclu- } sive of the } Metropolis )	4,664,589	32,494	35,263	31,332	40,800
Grand Total ..	6,612,800	46,136	49,949	43,550	56,100

\* The mortality of the districts of Wandsworth and Lewisham, and sub-district of Hampstead, is included in the above table, in each of the four years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

† The last quarter in London ended March 27, 1847.

‡ The former District of Leeds is now divided into the districts of *Leeds* and *Hunslet*, both included in the present return.

## MORTALITY OF THE METROPOLIS.

*A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending March of the Four Years, 1844-45-46-47.*

CAUSES OF DEATH.	Quarters ending March*.				CAUSES OF DEATH.	Quarters ending March*.			
	1844.	1845.	1846.	1847.		1844.	1845.	1846.	1847.
ALL CAUSES.....	13,471	14,528	12,376	15,289	III. Cephalitis.....	160	149	153	156
SPECIFIED CAUSES.....	13,403	14,491	12,322	15,245	Hydrocephalus....	481	460	483	440
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	2,457	2,506	2,277	1,926	Apoplexy.....	301	343	329	368
SPORADIC DISEASES.					Paralysis.....	281	298	273	342
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	1,282	1,450	1,273	1,386	Convulsions.....	702	696	511	619
III. Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	2,177	2,193	2,046	2,296	Tetanus.....	8	3	7	2
IV. Diseases of the Lungs and of the other Organs of Respiration.....	4,644	4,923	3,807	5,981	Chorea.....	3	2	..	2
V. Diseases of the Heart and Blood Vessels.....	416	512	455	666	Epilepsy.....	57	62	73	113
VI. Diseases of the Stomach, Liver, and other Organs of Digestion.....	795	981	940	1,030	Insanity.....	22	15	21	28
VII. Diseases of the Kidneys, &c.....	93	115	130	169	Delirium Tremens..	19	24	34	47
VIII. Childbirth, Diseases of the Uterus, &c.....	114	174	150	205	Disease of Brain, } &c.....	143	141	157	179
IX. Rheumatism, Diseases of the Bones, Joints, &c.....	74	98	121	141	IV. Laryngitis.....	9	23	35	62
X. Diseases of the Skin, Cellular Tissue, &c.....	23	12	53	46	Quinsey.....	17	25	10	17
XI. Old Age.....	1,018	1,127	612	971	Bronchitis.....	444	632	755	1,161
XII. Violence, Privation, and Intemperance.....	310	400	458	428	Pleurisy.....	24	28	33	67
I. Small Pox.....	252	481	77	82	Pneumonia.....	1,327	1,296	946	1,390
Measles.....	334	381	401	99	Hydrothorax.....	102	92	50	85
Scarlatina.....	536	421	221	196	Asthma.....	555	606	244	625
Whooping Cough.....	487	411	767	544	Phthisis or Consumption.....	1,904	1,972	1,571	1,823
Croup.....	107	112	79	67	Disease of Lungs, &c.....	262	249	160	251
Thrush.....	45	50	35	38	V. Pericarditis.....	24	33	17	29
Diarrhœa.....	79	109	119	178	Aneurism.....	9	21	18	14
Dysentery.....	29	14	20	34	Disease of Heart, &c.....	383	458	420	623
Cholera.....	4	4	7	3	VI. Teething.....	157	227	129	143
Influenza.....	66	34	22	63	Gastritis.....	19	14	24	23
Ague.....	5	5	4	4	Enteritis.....	141	177	117	102
Remittent Fever.....	6	5	15	26	Peritonitis.....	30	44	48	61
Typhus.....	432	362	410	442	Tabes Mesenterica..	100	116	139	192
Erysipelas.....	61	95	71	116	Worms.....	3	8	19	19
Syphilis.....	12	21	28	34	Ascites.....	21	24	29	26
Hydrophobia.....	2	1	1	..	Ulceration (of Intestines, &c.)..	21	25	36	34
II. Inflammation.....	18	..	..	..	Hernia.....	34	31	35	58
Hæmorrhage.....	30	29	24	37	Colic or Ileus.....	37	38	36	31
Dropsy.....	392	413	145	204	Intussusception....	6	4	9	9
Abscess.....	23	10	18	18	Stricture.....	6	6	8	7
Noma.....	..	3	9	3	Hæmatemesis.....	11	14	13	21
Mortification.....	49	53	44	57	Disease of Stomach, &c.....	66	65	78	79
Purpura.....	5	2	5	16	Disease of Pancreas.....	16	22	49	44
Scrofula.....	36	40	75	53	Hepatitis.....	28	32	34	31
Cancer.....	141	194	235	177	Jaundice.....	97	131	131	149
Tumour.....	13	5	3	3	Disease of Liver, &c.....	2	..	6	1
Gout.....	14	4	3	20	Disease of Spleen..	3	6	10	5
Atrophy.....	150	189	224	239	Ischuria.....	1	..	2	3
Debility.....	214	270	300	337	Diabetes.....	8	12	4	9
Malformations.....	23	31	51	49	Cystitis.....	6	3	3	8
Sudden Deaths†.....	174	207	137	173	Stone.....	6	6	7	12
					Stricture.....	14	13	13	16
					Disease of Kidneys, } &c.....	55	75	91	116
					VIII. Childbirth.....	80	133	101	146
					Paramenia.....	..	5	3	2
					Ovarian Dropsy.....	7	6	16	15
					Disease of Uterus, } &c.....	27	30	30	42
					IX. Arthritis.....	1	4	3	1
					Rheumatism.....	31	35	62	73
					Disease of Joints, } &c.....	42	59	56	67
					X. Carbuncle.....	3	..	1	4
					Phlegmon.....	..	2	9	9
					Ulcer.....	11	4	16	19
					Fistula.....	6	1	9	1
					Disease of Skin, &c.....	3	5	18	13
					XI. Old Age.....	1,018	1,127	612	971
					XII. Intemperance.....	11	15	17	12
					Privation.....	7	8	7	22
					Violent Deaths.....	292	377	434	394
					Causes not specified	68	37	54	44

\* The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the Quarters ending March they were respectively (1840) 170; (1841) 58; (1842) 57; (1843) 128; (1844) 171; (1845) 158; (1846) 142.

† Under the head of "sudden deaths" are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.





REMARKS ON THE WEATHER DURING THE QUARTER ENDING  
MARCH 31st, 1847,

By JAMES GLAISHER, Esq., of the Royal Observatory, Greenwich.

THE mean temperature of the quarter at Greenwich was  $37^{\circ}4$ , which is  $6^{\circ}3$  below that of the corresponding quarter of 1846;  $2^{\circ}$  above that of 1845;  $1^{\circ}6$  below that of 1844; and  $1^{\circ}6$  below that of the quarter for 25 years. The mean temperature of the week ending January 25th, was  $41^{\circ}7$ ; that of the preceding week was  $32^{\circ}6$ ; and that of the following week was  $34^{\circ}8$ : these numbers indicate great and frequent changes. The mean temperature of the week ending February 13th, was  $25^{\circ}6$ , being the lowest in the quarter. This remarkable week deserves particular mention. At Greenwich the departures from the mean on the 8th, 9th, 10th, 11th, 12th, and 13th were  $15^{\circ}3$ ,  $16^{\circ}3$ ,  $12^{\circ}4$ ,  $9^{\circ}0$ ,  $15^{\circ}7$ , and  $13^{\circ}6$  respectively. This very great and long continued fall below the average of the season appears to have applied to a zone of the country only, but to have been very uniform within that zone; the southern limit of which was in latitude  $50^{\circ}45$ , and the northern limit in latitude  $52^{\circ}$ . This remarkable cold was most severe in the county of Sussex, and particularly at Uckfield, in latitude  $50^{\circ}59$ ; between this latitude and  $51^{\circ}30$  it was very severe; beyond  $51^{\circ}30$ , and so extending to  $52^{\circ}$ , it was gradually less and less. In a letter addressed to me by C. L. Prince, Esq., of Uckfield, giving an account of the weather of this week, he states that

On the

8th day the lowest reading of the thermometer was  $14^{\circ}$ , and the highest was  $35^{\circ}$ .

9th	„	15	„	33
10th	„	15	„	36
11th	„	19	„	40
12th	„	11	„	33
13th	„	17	„	34
14th	„	19	„	44
15th	„	40!	„	53!

It may be interesting to take an extract from my own observations, taken at Dartmouth Terrace, Blackheath, in the parish of Lewisham, corresponding to the above.

On the

8th day the lowest reading of the thermometer was  $17^{\circ}0$ , and the highest was  $30^{\circ}0$

9th	„	$16^{\circ}6$	„	$29^{\circ}0$
10th	„	$15^{\circ}0$	„	$37^{\circ}5$
11th	„	$21^{\circ}0$	„	$36^{\circ}5$
12th	„	$6^{\circ}0$	„	$33^{\circ}5$
13th	„	$17^{\circ}0$	„	$33^{\circ}5$
14th	„	$20^{\circ}0$	„	$45^{\circ}0$
15th	„	$44^{\circ}0$	„	$52^{\circ}5$

The very close agreement between these two series of observations, day by day, proves that the great cold during this week was very uniform through this extent of country in latitude. From the circumstance of the minimum reading at Beckington,



in Somersetshire, whose latitude is only 6' less than that of Lewisham, and whose longitude is  $2^{\circ} 22'$  west, being  $5^{\circ}$ , differing by  $1^{\circ}$  only from the minimum at the latter place, the depression of temperature would seem to have extended across the whole country between these latitudes. Its southern limit appears to have been Chichester, and those places on its parallel, and its northern limit appears to have corresponded with a parallel passing a little south of Thwaite and Cambridge.

During the months of February and March the hygrometrical state of the air was very remarkable on account of its great dryness generally, and particularly at times when the temperature of the air was very low. From the numbers contained in the quarterly tables and abstracts, it would appear that this great dryness was general throughout the whole of the country, and from letters I have received from John Fletcher Miller, Esq., of Whitehaven, it seems to have been so in almost an equal degree at that place, notwithstanding its proximity to the Irish Sea. We may, therefore, consider that the weather at Greenwich in this respect during the quarter ending March 31st, 1847, represents that of the country generally.

The horizontal movement of the air was about 828 miles per week; being less than it usually is at this season by 200 miles.

The highest and lowest readings of the thermometer in the quarter, are shown for Greenwich, and for other places in the subjoined quarterly table.

The highest reading of the thermometer, whose bulb was placed in the full rays of the sun, and protected from lateral wind striking it, was  $89^{\circ}$ : the highest reading of a thermometer placed on the grass, was  $95^{\circ}$ , and the lowest was  $9^{\circ}$ ; the lowest on flax on grass, was  $2^{\circ}$ .

Vegetation during the past quarter has been subjected to frequent low temperatures. In January, the reading of the thermometer on grass was below  $32^{\circ}$  on 25 nights; the lowest was  $13^{\circ}0$ ; and it was several times below  $20^{\circ}$ : in February it was 20 nights below  $32^{\circ}$ : the lowest was  $10^{\circ}5$ : there were two readings at  $12^{\circ}$ , and there were several below  $20^{\circ}$ . In March, the reading was below  $32^{\circ}$  on part of 25 nights; the lowest being  $9^{\circ}$ : and there were several below  $20^{\circ}$ : so that vegetation through the whole quarter has been almost continually subjected to low temperatures at night, and in consequence of the dryness of the atmosphere during the day the evaporation from vegetation has been large, and therefore both during the night and day its temperature has been below the average of the season: consequently the sap has scarcely risen in trees, and vegetation generally is very backward.

Upon the whole the weather in this quarter has been more severe, and painful to the senses, than in either of the corresponding quarters in the three preceding years, and much more so than has been indicated by the thermometers, in consequence of the extreme dryness of the atmosphere causing the moisture from the skin to evaporate quickly, and thus subjecting it to the temperature of evaporation, which throughout this quarter has been much below that of the air.

The winter of 1846-7 may be considered to have commenced suddenly on November 27th, 1846, and to have continued fully to the end of this quarter.

QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES.	Mean Pressure of the Atmosphere of Dry Air reduced to the Level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of the Ther- mometer.	WIND.		Mean Amount of Cloud 0-10.	RAIN.		Mean Weight of Va- pour in a Cubic Foot of Air.	Mean additional weight of Vapour required to satu- rate a Cubic Foot of Air.	Mean Degree of Hu- midity.	Whole amount of Water in a Vertical Column of Atmo- sphere.	Weight of a Cubic Foot of Air.
						Mean estimated Strength 0-6.	General Direction.		Number of Days on which it fell.	Amount Col- lected.					
Guernsey .....	in. ..	41.6	59.0	25.0	° ..	° ..	E.	° ..	29	In. 6.63	Gr. ..	0.7	° 0.810	In. ..	Gr. ..
Helston .....	29.629	41.9	59.0	25.0	34.0	1.4	E.	5.4	41	8.76	2.9	0.7	0.810	3.5	544
Falmouth.....	..	41.6	55.0	29.0	26.0	2.0	N. & E.	7.3	51	11.65	..	..	..	..	..
Truro .....	..	41.0	52.0	27.0	25.0	1.3	N. & E.	..	53	12.03	..	..	..	..	..
Woodfield, Devon .....	..	42.7	57.0	26.0	31.0	2.5	N.E.	..	45	7.74	..	..	..	..	..
Exeter .....	29.64	40.6	60.0	18.0	42.0	..	E.	..	30	7.30	2.2	0.9	0.715	2.6	545
Brighton, Black Rock.	..	36.9	..	..	..	..	N.E.	6.8	30	omitted.	..	..	..	..	..
Chichester .....	..	37.3	58.0	18.0	40.0	..	N.E.	..	..	4.83	2.5	0.3	0.873	2.8	555
Uckfield .....	(29.895)	37.3	67.0	1.0	66.0	..	E.	..	26	4.21	..	..	..	..	..
Saffron Walden .....	..	..	..	..	..	..	Variable.	(2.7)	35	5.85	2.4	0.4	0.861	2.8	552
Beckington, Somerset...	..	35.3	61.0	5.0	56.0	..	S.E. & N.E.	..	..	..	..	..	..	..	..
Greenwich Observatory	29.769	37.4	64.5	10.0	54.5	2.0	S.E.	7.0	30	2.70	..	..	..	..	..
Walworth, Surrey .....	..	37.2	..	..	..	..	N.E.	7.0	37	8.52	..	..	..	..	..
Pool Cottage, Hereford	..	38.1	..	..	..	0.3	N.E.	7.3	26	3.56	..	..	..	..	..
Cambridge Observatory	29.760	33.0	64.2	18.7	45.5	2.8	E.	..	17	2.12	..	..	..	..	..
Thwaite, Suffolk.....	..	37.9	63.5	19.0	44.5	..	..	..	46	3.75	..	..	..	..	..
Empingham, Rutland...	..	35.8	58.0	28.0	30.0	1.7	S.E.	6.5	51	6.88	..	..	..	..	..
Whittington .....	..	36.5	58.3	14.5	43.8	..	Variable.	..	36	5.63	2.6	0.3	0.905	3.1	550
Derby .....	..	36.8	..	..	..	1.3	E.	6.2	46	4.62	2.6	0.7	0.896	3.0	550
Highfield House, Notts.	29.690	38.2	61.5	20.0	41.5	1.2	S.E.	7.6	39	4.81	2.6	0.8	0.780	3.0	545
Liverpool Observatory.	29.716	38.7	60.2	26.8	33.4	..	..	..	50	6.15	2.6	0.7	0.781	3.0	543
Ardwick, Manchester...	..	37.0	62.0	18.0	44.0	1.5	S.E.	..	40	5.07	2.6	0.5	0.844	2.7	547
Whitehaven .....	..	38.2	59.0	23.0	36.0	1.7	N.W.	..	27	1.28	2.4	..	..	..	..
Durham .....	29.716	36.5	60.4	17.2	43.2	..	s. by E.	..	30	4.41	..	..	..	..	..
Newcastle-on-Tyne....	..	36.7	63.0	21.0	42.0	..	..	..	..	..	..	..	..	..	..
No. of Column .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15



From the preceding table we learn the following particulars:—As the differences between the numbers in the first column, for all places except Uckfield\*, are small, and very likely arise from the different methods adopted in reducing the barometer readings to the constant temperature of  $32^{\circ}$ , we may consider that the pressure of the atmosphere of dry air has been the same at all these places, and as they extend to extreme latitudes, that it has been the same at all parts of England. By taking the means of these numbers, we find that the average pressure of the atmosphere of dry air for England during the quarter ending March 31, 1847, was 29·706 inches.

From the numbers in the second column, we find for the quarter ending March 31, 1847, that the mean temperature of the counties of Cornwall and Devonshire was  $41^{\circ}6$ , and for the remaining counties it was  $37^{\circ}2$ .

The range of the temperature has been different at different places, and no simple law depending on the latitude can be deduced from the numbers in the fifth column: the range, however, in Cornwall and Devonshire has been much smaller than in the other parts of England. The mean quarterly range for these counties was  $31^{\circ}6$ , and that for the remaining counties was  $44^{\circ}3$ : the extreme range in the above observations was  $66^{\circ}$ , being the same as that at Uckfield, at which place the thermometer reading was both higher and lower than in any other place in the country, during this quarter.

From the numbers in the sixth column, it would seem that the velocity of the wind has been nearly uniform throughout the country; and from the seventh column we find the mean directions have been S.E. and N.E., except at Durham, where it was N.W. From the numbers in the eighth column, it appears that the average amount of cloud has been nearly the same at all parts of the country, (except at Beckington; but it is very probable that the number above, ranging with this place, may be in error), and such as to cover about three-fifths of the whole sky.

The fall of rain has been the largest in amount in the counties of Cornwall and Devonshire: the mean amount for those counties is 9·5 inches. The fall at Pool Cottage, Hereford, is the next in order of magnitude, being 8·52 inches: the next in order are Whittington and Manchester; and the fall at Durham was only 1·28 inches.

From the numbers in the last five columns the following results are deduced:—

		Grains.
The average weight of vapour	} in the counties of Cornwall and Devonshire, was 2·6 in a cubic foot of air ..... } in the remaining counties of England .....	2·6
The additional weight of vapour required to saturate a cubic foot of air .....		
	} in the counties of Cornwall and Devonshire, was 0·8 in the remaining counties of England .....	0·5
The average degree of humidity .....		
	} in the counties of Cornwall and Devonshire, was 0·762 in the remaining counties of England .....	0·848
The average amount of water held in solution in a vertical column of the atmosphere .....		
	} in the counties of Cornwall and Devonshire, was 3·1 in the remaining counties of England .....	Inches. 2·9
The average weight of a cubic foot of air under its average temperature, humidity, and pressure .....		
	} in the counties of Cornwall and Devonshire, was 0·544 in the remaining counties of England .....	Grains. 0·549

So that the counties of Cornwall and Devonshire were not only much warmer, but the degree of humidity of the atmosphere was much less, and the weight of a certain mass of air was less than in any other part of the country.

\* The barometer at Uckfield has not been compared with a standard barometer; it would seem that its readings are too high by 0·1 in. or 0·2 in.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th July, 1846 and 1847; showing the Increase or Decrease thereof.—(Continued from page 189.)*

Sources of Revenue.	Years ending 5th July.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs.....	17,688,461	18,792,348	1,103,887	....
Excise .....	12,025,112	12,733,998	708,886	....
Stamps .....	6,988,940	7,201,797	212,857	....
Taxes.....	4,229,899	4,325,732	95,833	....
Property Tax .....	5,183,912	5,491,936	308,024	....
Post Office.....	794,000	854,000	60,000	....
Crown Lands.....	100,000	112,000	12,000	....
Miscellaneous .....	193,237	307,621	114,384	....
Total Ordinary Revenue ....	47,203,561	49,819,432	2,615,871	....
China Money .....	1,190,859	227,644	....	963,215
Imprest and other Moneys .	215,523	208,190	....	7,333
Repayments of Advances....	1,446,140	804,843	....	641,297
Total Income.....	50,056,083	51,060,109	2,615,871	1,611,845
Deduct Decrease .....			1,611,845	
Increase on the Year .....			1,004,026	

Sources of Revenue.	Quarters ending 5th July.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs .....	4,523,391	4,519,119	....	4,272
Excise .....	3,104,711	3,291,052	186,341	....
Stamps .....	1,730,495	1,869,464	138,969	....
Taxes.....	2,006,427	2,075,001	68,574	....
Property Tax.....	1,009,162	1,036,517	27,355	....
Post Office.....	181,000	215,000	34,000	....
Crown Lands.....	....	....	....	....
Miscellaneous .....	18,001	7,461	....	10,540
Total Ordinary Revenue ....	12,573,187	13,013,614	455,239	14,812
China Money .....	440,000	....	....	440,000
Imprest and other Moneys	73,939	88,632	14,693	....
Repayments of Advances ....	111,607	137,944	26,337	....
Total Income.....	13,198,733	13,240,190	496,269	454,812
Deduct Decrease .....			454,812	
Increase on the Quarter.....			41,457	

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 5th July, 1847, was 18,765,298*l.* The total charge upon it was 9,531,581*l.*, leaving a surplus of 9,233,717*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ending 5th April, 1847, and paid off out of the growing produce of that fund for the quarter ending 5th July, 1847, after deducting 550,000*l.* paid off out of the Sinking Fund, was 2,916,960*l.*

The probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund in the quarter ending 5th July, 1847, is stated at 796,941*l.*



CORN.

*Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week of the Second Quarter of 1847; together with the Average Prices for the whole Quarter.—(Continued from p. 190.)*

Returns received at the Corn Office, 1847.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.	Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter.
	Weekly Average	Aggregate Average of Six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average		
Weeks ending 1847.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.
April 3 .	77 1	75 6	51 3	31 8	57 7	51 5	56 10	April 8	
10 .	74 5	75 6	49 8	32 7	54 10	50 10	56 0	15	
17 .	74 1	75 5	48 4	29 7	56 1	49 10	50 7	22	
24 .	75 10	75 9	48 5	29 7	53 6	49 11	52 4	29	
May 1 .	79 6	76 4	49 6	30 11	55 6	51 10	52 11	May 6	
8 .	81 10	77 1	51 0	31 6	58 3	53 0	54 11	13	
15 .	85 2	78 6	52 7	32 11	58 7	54 7	55 0	20	
22 .	94 10	81 10	55 10	34 3	69 4	57 8	60 11	27	
29 .	102 5	86 7	56 5	36 3	73 11	59 10	59 3	June 3	Duty Suspended.
June 5 .	99 10	90 7	55 3	35 11	72 0	60 3	61 8	10	
12 .	88 10	92 2	52 0	34 1	67 1	57 8	59 1	17	
19 .	91 7	93 9	52 1	33 9	76 11	57 5	56 10	24	
26 .	91 4	94 10	52 4	32 11	64 11	57 8	57 0	July 1	
Average of the Quarter }	85 10	82 7	51 10	32 9	62 11	54 9	56 4	..	..

*Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th April, 5th May, and 5th June, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them.—(Continued from p. 190.)*

WHEAT.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th April	102,570	983	103,553	106,884	1,103	107,987	15,990	330	16,320
5th May	131,139	1	131,140	133,631	217	133,848	14,359	114	14,473
5th June	192,942	532	193,474	192,990	525	193,515	10,801	28	10,829

WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th April	407,569	7,631	415,200	480,799	7,881	488,680	97,835	10,718	108,553
5th May	467,287	12,799	480,086	522,006	19,717	541,723	43,273	3,801	47,074
5th June	475,973	10,018	485,991	492,238	11,701	503,939	27,073	2,118	29,191

## CURRENCY.

## BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 3rd April, the 1st May, the 29th May, and the 26th June, 1847.—(Continued from p. 191.)*

## ISSUE DEPARTMENT.

	Weeks ending			
	3rd April, 1847	1st May, 1847.	29th May, 1847	26th June, 1847
	£	£	£	£
Notes issued .....	23,554,640	22,506,585	23,290,420	23,676,545
Government Debt .....	11,015 100	11,015,100	11,015,100	11,015,100
Other Securities .....	2,984,900	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion .....	8,066,355	7,083,767	7,806,303	8,227,545
Silver Bullion .....	1,488,285	1,422,818	1,484,117	1,449,000
Total .....	23,554,640	22,506,585	23,290,420	23,676,545

## BANKING DEPARTMENT.

Proprietors' Capital .....	14,553,000	14,553,000	14,553,000	14,553,000
Rest .....	3,991,333	3,412,713	3,472,368	3,463,990
Public Deposits .....	6,001,947	2,299,154	6,977,853	9,796,647
Other Deposits .....	9,502,091	9,312,048	8,431,900	7,920,706
Seven Day and other Bills ....	960,294	835,291	766,451	764,036
Total .....	35,008,665	30,412,206	34,201,572	36,498,379
Government Securities, including } Dead Weight Annuities .... }	11,990,079	10,727 319	11,652,305	11,707,217
Other Securities .....	18,627,116	16,112,676	17,041,936	18,315,772
Notes .....	3,699,700	2,741,080	4,628,030	5,625,530
Gold and Silver Coin .....	691,770	831,131	879,301	849,860
Total .....	35,008,665	30,412,206	34,201,572	36,498,379

## COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 27th March, 24th April, and 22nd May, 1847.—(Continued from p. 191.)*

Banks.	27th March, 1847.	24th April, 1847.	22nd May, 1847.
England—Private Banks .....	4,542,057	4,725,315	4,614,034
Joint Stock Banks .....	3,248,528	3,301,057	3,251,316
Scotland—Chartered, Private, and } Joint Stock Banks .....	3,360,348	3,395,524	3,516,944
Ireland—Bank of Ireland .....	3,857,800	3,803,525	3,623,525
Private and Joint Stock } Banks .....	2,846,936	2,717,709	2,394,894
Total .....	17,855,669	17,943,130	17,400,713



## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending June 30, 1847; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 192.)*

COUNTIES.	April.	May.	June.	TRADES.	April.	May.	June.
Metropolis.....	26	43	34	<i>Agriculture and connected Trades.</i>			
Bedford .....		1	1	Farmers .....	1	3	...
Berks .....	2			Agricultural Implement Makers, &c. ....		1	...
Bucks.....		2		Corn Factors .....	1		...
Cambridge .....			1	Millers and Malsters .....	1		1
Cheshire .....		4		Hop Merchants .....	2	2	...
Cornwall .....		1	1	Brewers .....		2	...
Cumberland .....		1		Horse and Cattle Dealers, and } Woolstaplers .....		4	4
Derby .....			2	<i>Mining and connected Trades.</i>			
Devon .....	4	2	3	Mining Firms .....	2	1	...
Dorset .....				Blasting Works .....			...
Durham.....		2	4	<i>Manufactures.</i>			
Essex.....	3	4	2	Woollen Manufacturers .....	1	2	...
Gloucester.....	2	1	4	Cotton .....	2	2	1
Hants.....	1	4	4	Linen .....			...
Hereford .....				Silk .....			...
Hertford .....	1	2		Printers and Dyers .....	1	2	...
Huntingdon .....				Lace Manufacturers .....	1	2	...
Kent .....	3	8	2	Hosiery .....		1	...
Lancashire.....	13	13	13	Hardware .....		3	...
Leicester .....			1	Earthenware .....	1	2	...
Lincoln .....			1	Glass .....		2	...
Middlesex (exclusive of the Metropolis) }	3	1	1	Paper .....			1
Monmouth.....				Builders .....	4	10	8
Norfolk .....	2	1	1	Miscellaneous Manufacturers...	13	12	13
Northampton.....			2	<i>Commerce.</i>			
Northumberland .....	1	1		Bankers and Merchants .....	7	6	6
Nottingham .....	1	5	3	Shipowners, Warehousemen, } Brokers, and Wholesale } Dealers generally .....	4	9	11
Oxford .....		1		<i>Retail and Handicraft Trades.</i>			
Rutland .....		1		Bakers .....		1	2
Salop .....	3	1		Butchers .....	2	1	1
Somerset (including Bristol) }	4	4	4	Corn and Hay Dealers .....			3
Stafford .....	3	3	3	Innkeepers and Victuallers .....	11	8	5
Suffolk .....			1	Wine and Spirit Merchants .....	3	1	2
Surrey (exclusive of the Metropolis) }	1	1	3	Dealers in Grocery, Drugs, } and Spices.....	8	8	19
Sussex .....				Makers of, and Dealers in, } Clothing .....	10	15	9
Warwick .....	4	3	3	Makers of, and Dealers in, } Furniture .....	2	3	3
Westmoreland .....	1			Coach Builders .....	2	1	1
Wilts .....	1			Miscellaneous .....	11	22	13
Worcester .....	1	2					
York (East Riding) ....	3	6	2				
„ (North Riding) .....	2	3	2				
„ (West Riding) ....	1	2	3				
Wales.....	4	3	2				
Total .....	90	126	103	Total.....	90	126	103

# QUARTERLY JOURNAL

OF THE

## STATISTICAL SOCIETY OF LONDON.

NOVEMBER, 1847.

*Prices of the Cerealia and other Edibles in India and England compared.* By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society.

[Read before the Statistical Section of the British Association at Oxford,  
29th June, 1847.]

IN the month of November last, in consequence of the high ruling prices of bread stuffs in England, with the almost certain prospect of a speedy enhancement that would cause much privation in the mass of the population, I was induced to call the attention of the Statistical Society of London to India, as a source of supply; not only on the ground of the great variety of bread-grains which India produces, but for the average cheapness of these grains, which, compared with prices in England, would leave a very wide margin, even when scarcity did not prevail in Europe, for the costs of transit from the interior to the coast in India, the expense of shipping and freight, and other contingent charges, and yet leave a moderate profit; but which source of supply, in cases of protracted dearth in Europe, not only would become of high importance to the welfare of England, but would hold out to merchants the chances of a considerable pecuniary return. With these views, but limiting my comparison of prices to Wheat, Wheat-Flour, and Peas, (Dhall), in Bengal and the North-Western Provinces, and England, I submitted the following table at a meeting of the Statistical Society:—

BENGAL. Averages for July, 1845 for 53 Towns.			ENGLAND. Averages, November, 1846, Mark Lane.		
Quantity of Wheat procurable for the Rupee of 2s.	Quantity of Flour procurable for the Rupee of 2s.	Quantity of Dhall procurable for the Rupee of 2s.	Quantity of Wheat procurable for the sum of 2s.	Quantity of Flour procurable for the sum of 2s.	Quantity of Peas procurable for the sum of 2s.
About 57½ pounds, or 16s. 8d. per quarter.	About 31 pounds.	About 40½ pounds, or 23s. 6d. per quarter.	About 17lbs. at the aver- age market quotation of 57s. per qr.	About 11lbs. at the aver- age market quotation of 52s. for the sack of 280 pounds.	About 19lbs. at the aver- age market quotation of 52s. the quarter.

Average Weight of Wheat is 60 lbs. to the bushel; 8 bushels, or 480 lbs. to the quarter.



It is hence seen that with Wheat at 57s. per quarter in England in November, it was nearly three-and-a-half times dearer in England than in India, the averages in India having the disadvantage of being founded upon retail prices at great military stations, where there would necessarily be considerable demand, and, consequently, enhanced prices. Flour was about three times dearer in Mark Lane than in India, and Peas more than twice as dear.

To give the facts upon which this comparison of prices was founded a wider circulation, in the month of January I inserted the above table in the "Times" newspaper, in the hope that attempts might be made to profit by the information it contained. From a gentleman, however, of the London Custom-House, who had heard my first communication to the Statistical Society, and who had, in consequence, been carefully watching the importations, I have since learnt that not any bread-stuffs whatever have been brought from India to London, nor is he aware of any order having been sent for their importation\*. Under these circumstances I might have allowed the subject to rest, but several prices current, some of them for a series of years from various parts of India, having recently come into my hands; bearing in mind also the recent change in the Corn Laws in England,—the prospects of railways in India, and the facilities that will thus be afforded for the cheap conveyance of produce from the interior to the coasts, I would look to a period when the cereal resources of India may be made available in England; and I desire, therefore, to put upon record such numerical facts as may promote that object, and be useful to parties, whether in England or India, who may wish to form a judgment upon the policy and probable pecuniary results of entering into new channels of commercial enterprise.

I am indebted to Mr. Chapman, who has been employed in Western India in working out the statistics of the probable trade of a projected line of railway from Bombay towards the cotton districts of Berar, for several tables of prices. Some of them were supplied to him by the civil and military functionaries to whom he applied; and the accuracy of the tables is attested by the official signatures of the parties. Some of the tables were supplied by Mamlutdars, or native revenue functionaries. As neighbouring towns and villages in India have frequently weights and measures of similar denominations, but varying from a common standard, Mr. Chapman had very considerable difficulties to contend with in reducing weights and measures to the common, or so-called Indian standard, of 14,400 grains avoirdupois to the seer. As far as Mr. Chapman is concerned, I am free to bear testimony to his unwearying industry and desire of accuracy; and any sources of error in converting local seers into Indian seers, must be referred to the native authorities at those localities; but the errors themselves (if existing,) merge in striking averages, and have not any serious bearing upon general results.

It may be as well to premise, that the cereal resources of India are not limited to the very few bread-stuffs that Europe produces. Wheat, which is the chief bread-stuff of Europe, and which all classes look upon as necessary to existence, and which indeed is proverbially the staff of life, is in India so dear comparatively with other grains, that it

\* Within the last fortnight a few bags of wheat have been brought from Calcutta.

forms the food of only a small part of the population ; and probably seventy or eighty millions of souls live upon grains whose names are scarcely known except to the learned in Europe, but which, nevertheless, are productive, nourishing, and wholesome. It is equally a mistake to suppose that the people of India live upon rice. That grain is very frequently twice the price of wheat, (excepting in a few localities,) and can only be used by the masses who dwell in low lands where Nature floods the soil periodically, and where the absence of any marked inclination in the country admits of the easy retention of the water. Wherever works for irrigation are necessary, an enhanced price of the products is the consequence ; and in proportion to this enhancement is the limited consumption by the people. Rice, therefore, produced by artificial irrigation, is scarcely within the reach of the lower classes.

The following are some of the bread grains produced in India and Arabia :—Belonging to the Khurreef, or wet-season harvest, Jowaree, or Jondla, (*Holcus sorghum*, or *Andropogan sorghum*), is most extensively cultivated. Of this species there are eight varieties. From a single head of one variety (Shaloo), taken at random, I have obtained 2,895 perfect seeds. The grain, which is about the size of white mustard seed, is sweet, palatable, and nutritive. The next most commonly cultivated grain is Bajra, or Sujgoora, (*Holcus spicatus*, or *Panicum spicatum*). Under favourable circumstances there are from two to eight heads to one stalk ; and I have obtained 2,120 seeds from a single head, which in the case of eight heads would give a return of 16,960 for one. The grain is somewhat larger than canary seed. The next grain is Rahle, or Kungnee, (*Panicum Italicum*.) There are two varieties, each stalk generally with one head, giving a return of 1,850 for one. The next grain is Bhadlee, (*Panicum miliaceum*) ; the plant has sometimes three or four stalks, but each with one head only. The grain-bearing Panicums, however, are not limited to these, for so numerous are they in Ceylon, that Moon, in his Catalogue of Ceylon Plants, gives Latin names to no less than thirty distinct species. Kodroo is the next grain, (*Paspalum frumentaceum*), one of its Mahratta names is Bhurtee, in allusion to its extraordinary fertility. The stalks from one seed vary from four to eleven ; but on the edges of a field where the plants have an opportunity of spreading, I have counted twenty stalks radiating from a single root. Each head averages 1,083 seeds ; and for the plant with twenty stalks there would be a return of 21,660 for one. But on the 15th of September, 1825, near Serroor, I counted thirty-three heads of grains on a single plant, each head averaging 1,860 seeds, giving the astonishing return of 61,380 seeds for one. The average of seven heads to a plant would give a return of 7,581 for one. The grain is the size of a pin's head.

Mukka, or Indian Corn, (*Zea Mays*), comes next. It is not usually cultivated as a bread-grain, but when nearly ripe the head is fried and eaten with butter or sugar. Should the farmer have more than he can consume in this state the rest is allowed to ripen, and the seed is ground into flour. The stalk sometimes reaches the height of from nine to twelve feet. This is the "Indian Corn" whose importation into England from America has so essentially contributed in the late scarcity to relieve the sufferings of the people.

Rice is cultivated wherever physical circumstances are favourable to



it. It is called Dhan or Bhat, (*Oryza sativa*.) The natives in Western India consider that there are at least eight or ten species of rice, and very many varieties. But Mr. Moon, in his Catalogue of the Plants of Ceylon, gives the names of no less than 160 varieties, from the wild rice to the most delicate, each having its Singhalese native name,—bird's-beak, melon, sprigless, red hare's-chin, leafless, white-jointed gold, rattan-leaved, &c., &c.; and each of these names Mr. Moon has translated into English. The return in the Deccan is reckoned at about 30 to one. A very important grain is Natchnee, or Ragee, *Eleusine Coracana*, or *Cynosurus Coracanus*. The grain is much valued by the poor, from its hardihood, abundant return, wholesomeness, and cheapness. The return is reckoned at 200 for one. Sawa is another cultivated panicum, but the species is not satisfactorily ascertained. The grain is of the size and form of a canary-seed, but blackish; the return about 48 for one. Wuree is the last of the bread grains of the Khurreef, or wet-season harvest. This is said to be the *Coix barbata*. It is small, of the size, colour, and character of the canary-seed; the return 240 for one. The pulses and legumes of the Khurreef harvest are too numerous to detail.

Of the Rubbee, or spring, or dry-season harvest, the principal bread-grain produce is wheat, of which there are four varieties, two of which have such peculiar and permanent characters as to justify their being designated species. All the wheats are bearded. The first is Bukshee, the next Kupleh, the third Kateh, and the fourth Potayai. All the varieties have from two to twenty-five stalks from the same root; and I have a specimen in my possession with twenty-five stalks. The first gives a return of about 81 for one. The Kupleh has the husk closely attached to the grain, whence its name. Examining a field on the 20th of February, 1825, I found few plants with less than ten stalks, and the grains from some of the heads were  $\frac{9}{20}$ ths of an inch long, and the lower glumes were treble seeded. Each head averaging 58 grains. This would give a return of 580 for one, but with twenty-five ears the return would be 1,450 for one. The Kateh, so named from the seed terminating in a prickle, or point, gives a return of from 384 to 480 for one, and the Potayai, which is a short-bellied grain, whence its name, returns about 210 for one\*.

Urburee, or Chenna, (*Cicer arietinum*), forms a part of every farmer's cultivation. It is a highly valuable pulse, although chiefly given to horses in India as a substitute for oats and barley; it is used nevertheless by the people in a variety of ways;—as split peas in Europe, and when parched, travellers live for days upon it on a journey; it is made into puddings and stirabout, and it is even used as a bread-grain, being ground into flour and made into cakes. There are four varieties. The returns upon a plant range from 58 seeds up to 170. The grain is about the size of a marrowfat pea, and in form is like a ram's head, (whence its name). The Shaloo, or Jowaree, is that variety or species of *Holcus*, or *Andropogon*, which is sown at the end of the rains, unlike the rest of the varieties, and it belongs therefore to the spring harvest. The grain is held in high estimation, and is the general food of those of the lower orders who do not inhabit the mountainous or jungly

\* The wheats ripen in January and February.

tracts. It ripens in February. I ascertained that the average return in one head of the plant was about 1,514 seeds for one.

Jau, or Jo,—Barley,—(*Hordeum hexastichon*.) Barley is not generally cultivated, and is seldom used for bread; but it is necessary in many sacrificial ceremonies of the Hindoos. Four varieties are mentioned in Hindoo books. On the 1st of February, 1826, I found some fields of barley ripening at Tulleeghur, on a table land in the Deccan, about 3,000 feet above the sea, and in March I met with some fields in the Desh, or open country, at less than 2,000 feet above the sea, latitude  $18^{\circ}$  to  $19^{\circ}$  N., the plants averaging five heads of grain, and giving a return of 240 for one.

Watanah, or Muthur, (*Pisum sativum*.)—Peas—are cultivated, but not so extensively as gram (*Cicer*). They are used precisely as gram is used, but are not so much esteemed.

Dhall (*Cytisus cajan*).—This shrub produces the universal substitute for the split pea of Europe, but it is a much sweeter and more agreeable pulse than the pea.

Such are the edible grains of the spring harvest. Of the other products the four species of sugar-cane, cotton, tobacco, dyes, oil-seeds, hemp, flax, and the condiments belonging to “garden produce,” it is not necessary to speak, as I shall not be able to use them in any comparison of prices. Indeed, my chief motive for the above enumeration is to point out the numerous bread-grains of India which cannot come into any comparison with European products, but which, if not mentioned, might lead the European speculator to suppose that he had nothing more to look to than the grains enumerated in the Price Lists, to which I now refer.

The first Price List gives the average number of seers per rupee of 2s. at seven different markets in the collectorates of the Deccan, under the Bombay Presidency, from the years 1827 to 1845 inclusive. The grains are wheat, rice, gram, bajra, and jowaree. In this table the averages are given in the local seers of the markets; for the most embarrassing discrepancies exist in the magnitude of measures of the same denomination even at neighbouring villages; and this fact should be generally known to prevent misconceptions in regard to the absolute value of local means of supply. I present the table also in its present state to warn the speculator against an entire reliance, even upon a system of averages, for a series of years; and particularly to guard him against a reliance upon the prices of any one year continuing in the following or succeeding years. In fact, the produce of the Khurreef harvest is dependent on the continuous but temperate supply of water during the monsoon; and the crops should be equally removed from the extremes of being drowned or dried up. In the Rubbee, or spring, or dry-season harvest, the crops are influenced by the amount of dew deposited; and departures from a normal state in all these matters produce the most violent fluctuations in prices. For instance, the prices of the Khurreef produce at Indapoor fluctuated from  $15\frac{1}{2}$  and 18 seers of bajra per rupee in 1845 and 1832 respectively, to 58 seers and 54 seers in the years 1837 and 1828 respectively. The extreme range between any one year at any one of the seven markets and any other year was, from  $15\frac{1}{2}$  seers at Indapoor in 1845 to 64 seers at Kulus in 1828. It will be observed also, that the prices at the seven markets sometimes differ widely from each other in



the same year. In the produce of the Rubbee, or dry-season crop, we find wheat varying in price at Kulus from 13 seers in 1845 to 42 in 1837, and at Sewnere, in the same years, from 13 to 44 seers. The extreme range, in the nineteen years, appears to have been from 12 seers in the Mawals, or hilly tracts, in 1845, to 44 seers at Sewnere in 1837. These facts offer sufficiently instructive lessons; and as the figures used are averages of prices for the year in each market, the fluctuations within the year, were they known, might exhibit greater discrepancies.

Table II. presents the local seer measures of No. 1 reduced to Indian seer measures, each seer containing 14,400 grains weight avoirdupois of bajra, which, from the uniformity and unchangeableness of the seed, is looked upon as the best standard by which to fix the capacity of a native measure. This plan, however, is not so efficient as one I recommended to the Government of Bombay twenty years ago. With a view to insure uniformity in weights and measures throughout the Deccan, I suggested that the Company's rupee should be the multiple, whether for weights or measures; and that measures of capacity, without regard to form, should contain a quantity of water at the ordinary temperature, equal to the weight of a prescribed number of rupees. This would have insured sufficient exactness for all practical purposes; and the means of testing the accuracy of the weights and measures would always have been available to the collectors and magistrates, and the native names of the divisions would have been preserved. This simple plan, however, remains to be adopted.

The reduction of the local measures of Table II. into Indian measures was effected by Mr. Chapman, and must have been a work of infinite labour, as he had to ascertain the exact value of each local seer. The annual averages in Indian seers, so reduced, were converted by me into avoirdupois weight, and consequent upon that last conversion the price per quarter English has been determined, and the following are the results:—

	Indian Seers per Rupee, average of 19 Years.	Indian Seers in Avoirdupois weight.	Prices per Quarter English.
		lbs. oz.	s. d.
Wheat .....	31 $\frac{5}{19}$	64 5	14 10
Rice .....	17 $\frac{17}{19}$	36 13	0 $\frac{7}{10}$ per lb.
Gram .....	29 $\frac{12}{19}$	60 5	15 11
Bajra .....	40 $\frac{7}{19}$	82 10	11 7
Jowaree .....	48 $\frac{16}{19}$	100 8	9 6

It is thus shown that an average of years gives 64 lbs. 5 oz. of wheat for 2s., 36 lbs. 13 oz. of rice, and 100 $\frac{1}{2}$  lbs. of that nutritious grain, jowaree (*Holcus sorghum*), for 2s.; a sufficiency to support a man for two months at least, if the dietary in the prisons of the North-Western Provinces and Bengal be taken as a standard. In these prisons the daily allowance to a convict is from 1 to 2 lbs. of wheaten flour, regulated by the nature and duration of the hard labour to which the convict may be condemned. But Table II. shows that in 1828 the

average price of jowaree gave nearly 137 lbs. avoirdupois for 2s., so that a man could support himself for much less than a halfpenny per diem, and get fat upon it. But if reference be made to Table No. I, it is seen that at Kulus in the years 1828 and 1843 there were 80 local seers of jowaree per rupee, or  $99\frac{4}{5}$  Indian seers, equal to 204 lbs. avoirdupois, for 2s., or more than 2 lbs. for a farthing, so that a man could live for less than a farthing per diem for the cost of meal. In wheat it is seen that the average prices in 1828 and 1836 were  $36\frac{1}{8}$  and  $36\frac{5}{7}$  Indian seers per rupee, equivalent to 74 lbs. and  $75\frac{1}{4}$  avoirdupois. The above bread-grains, at such cheap rates, are within a moderate distance of the sea-coast. But Tables III., III\*, and III\*\*, carry us farther inland, and the cheapness is very much greater. These tables are from Colonel Sleeman, the Commissioner of the Saugor and Nerbuddah territories, and give the prices at seven markets within his commissionership from 1831 to 1840 inclusive, and from 1843 to 1846, both inclusive; but the prices of wheat, gram, and rice, only are given. In these tables it is shown that at Baitool in 1843 as much as 167 lbs. avoirdupois of wheat were sold for 2s., and at the seven markets enumerated the price varied in the year only from 5s. 6d. per quarter English to 6s. 8d. In succeeding years the prices were slightly enhanced, but in 1846 famine prices ruled owing to the failure of the monsoon; that is to say, at Baitool the price of wheat, which in 1843 was 5s. 6d. per quarter, became 21s. 8d. But the average prices of wheat at the seven markets for the years 1843, 1844, and 1845, was 7s.  $6\frac{3}{4}$ d. per quarter: gram, similarly, was 7s.  $7\frac{1}{2}$ d. per quarter, and rice, 4s.  $4\frac{1}{2}$ d. per cwt. For the ten years preceding, from 1831 to 1840, the average price of wheat was 10s. 6d. per quarter (Table III\*\*).

Table IV. gives the prices at Hoshungabad for various periods, upon the authority of Colonel Ouseley, the Principal Assistant-Agent to the Governor-General. Mr. Chapman has reduced part of this table to the price per ton in favour of wheat, gram, and rice, from the years 1822 to 1838, both inclusive. The prices are separately given for November, the sowing time, and June, the storing time. Prices are somewhat dearer at sowing time, but not markedly so. The fluctuations in prices in this long period are less than might have been expected. It will suffice to give the maximum and minimum prices of wheat, gram, and rice, at the sowing or dearest time. In 1826, wheat was 5s. the quarter, gram, 3s. 7d. per quarter, and rice, 2.83 lbs. for 1d., or 33.96 lbs. for 1s., or 3s.  $3\frac{1}{2}$ d. per cwt. In 1833 the monsoon failed, and in 1834 famine prices ruled in consequence. Wheat was 23s. 10d. per quarter, gram, 14s. 9d. per quarter, and rice was 1.46 lbs. for 1d., or 17.52 lbs. for 1s., or 6s. 5d. per cwt. The average prices for these sixteen years, including the years of dearth were, wheat, 10s.  $8\frac{3}{4}$ d. per quarter, gram, 7s. 11d. per quarter, and rice, 4s.  $7\frac{1}{2}$ d. per cwt. As I would rather lean to the unfavourable view of prices than to the favourable, I shall not give the prices in harvest time.

Table V. was supplied by the Resident at Nagpoor, Colonel Spiers, and contains the accounts of the quantities, and the price of salt imported into Nagpoor in 1846, the cost of carriage to and from the coast, and the prices of grains for the years 1843, 1844, and 1845;



but as the monsoon had failed in all these years, particularly in the last, little use can be made of this table. Nevertheless, wheat in 1843 was  $113\frac{1}{7}$  lbs. for 2s., or 8s. 7d. per quarter, and in 1845, the scarcity year,  $59\frac{5}{7}$  lbs. for 2s., or 16s. 1d. per quarter, and the average of the three years was  $88\frac{4}{7}$  lbs. for 2s., or 10s. 10d. per quarter. The average of the cheapest rice,  $59\frac{4}{7}$  lbs. for 2s., or 3s. 9d. per cwt., and the dearest  $38\frac{2}{7}$  lbs. for 2s., or 5s. 11d. per cwt. The cheapest gram,  $82\frac{2}{7}$  lbs. for 2s., or 11s. 8d. per quarter; the dearest,  $58\frac{4}{7}$  lbs. for 2s., or 16s.  $4\frac{1}{2}$ d. per quarter, and the average  $73\frac{2}{7}$  lbs. for 2s., or 13s. 1d. per quarter. It is seen from Colonel Spiers's memorandum that the cost of taking cotton or other produce from Nagpoor to Bombay and back is 50 rupees for 7 maunds (about 19s. 5d. per cwt.); but this is for the double journey; and the single trip, supposing the cart loaded both ways, would cost 9s.  $8\frac{1}{2}$ d. per cwt., or about 1d. per lb. If the cost of carriage be in Nagpoor rupees the above sums are respectively 15s. 5d. and 7s.  $8\frac{1}{2}$ d.

Table VI. gives the prices of rice, wheat, jowaree, bajra, and gram, in Goozrat, at the cities of Ahmedabad, Khaira, Broach, and Surat, on the 15th August, 1846. As the prices are only for one year, and that a year of scarcity, they cannot afford any guide for the usual prices in Goozrat. It will suffice to state that the average price of wheat at Ahmedabad, was 27·6 seers per rupee, ( $55\frac{1}{2}$  lbs.) or 17s. 11d. per quarter; the cheapest, was 35·7 seers (72 lbs.), and the dearest, 24 seers ( $49\frac{1}{4}$  lbs.), while at Broach the average was only 12·63 seers ( $25\frac{1}{2}$  lbs.), the lowest price, 14·20 seers ( $28\frac{3}{4}$  lbs.), and the highest, 11·20 seers (23 lbs.) The average price of rice at Ahmedabad  $25\frac{1}{2}$  seers ( $52\frac{3}{7}$  lbs.), or 4s. 3d. per cwt., gram,  $16\frac{3}{4}$  seers ( $34\frac{2}{7}$  lbs.) per rupee, or 28s. per quarter, jowaree,  $34\frac{3}{4}$  seers ( $71\frac{2}{7}$  lbs.), or 13s. 5d. per quarter, bajra,  $27\frac{1}{2}$  seers per rupee ( $56\frac{4}{7}$  lbs.), or 16s. 11d. per quarter.

Tables VII. and VIII. give the retail prices respectively at fifty-three and fifty-six military stations in the Bengal Presidency for the years 1845 and 1846 of bread-stuffs, beef, mutton, butter, sugar, fowls, &c. These tables labour under great disadvantages, as they do not give the wholesale prices of any article, and are only for two years, and those years of comparative scarcity. But even with these disadvantages it is found that wheat in 1845 averaged 57 lbs. 10 oz. for 2s., or 16s. 8d. per quarter; the first sort of rice, 25 lbs. 7 oz. for 2s., or  $\frac{9.8}{100}$  of a penny per lb., or 8s.  $9\frac{1}{2}$ d. per cwt., and the third sort of rice, 45 lbs. 4 oz. for 2s., or  $\frac{5.3}{100}$  of a penny per lb., or 4s. 11d. per cwt.; dhall, or split peas, 40 lbs. 12 oz. for 2s., or 23s. 6d. per quarter; flour, 31 lbs. for 2s., or  $\frac{7.7.1}{100}$  of a penny per lb.; sugar-candy, 6 lbs.  $10\frac{3}{4}$  oz. per rupee, or  $3\frac{1}{2}$ d. per lb.; salt, of the first sort, 20 lbs. 9 oz. per rupee, or  $1\frac{1}{5}$ d. per lb., or 10s. 11d. per cwt. But these averages would be fallacious guides were the merchant to allow them to influence his purchases; and the return therefore affords a useful lesson, that even averages in statistics may mislead. For instance, the *average* price of rice is 25 lb. 7 oz., and of the second kind, 45 lbs. 4 oz., while at Chittagong, a place accessible by sea, it is respectively  $82\frac{2}{7}$  lbs. and  $102\frac{6}{7}$  lbs. per rupee, or 2s.  $8\frac{1}{2}$ d. and 2s.  $2\frac{1}{2}$ d. per cwt., and the same feature is observable in some other articles. With respect to the price of meat and fowls, it is seen that bullocks varied in price from 5 rupees, or 10s. per head, at Chunar to 7 rupees 10 annas, or 15s. 6d. at Calcutta, and 20 rupees, or 40s., at

Allahabad; sheep vary from 5 rupees 2 annas, or 10s. 3d., at Calcutta, to half a rupee, or 1s., at Benares; and the ordinary price would appear to be about 2s. 6d. for a sheep. Fowls are classed in three sorts, and vary in price from two, three, and four, at Lucknow, of the respective sorts, per rupee, to twenty of the first and second sort, at Almorah. In the return for 1846 the prices are somewhat enhanced, but not sufficiently so to render it necessary to go into details.

It has been shown that the average price of the *best* salt was 20 lbs. 9 oz. for 2s., varying at different places from 5 $\frac{3}{4}$  lbs. at Calcutta, or 38s. 11d. per cwt. (refined for European families?) to 49 $\frac{1}{7}$  lbs. at Cuttack, or 4s. 6 $\frac{3}{4}$ d. per cwt., but it will be recollected that these are the retail prices of a monopolized article. The duty on imported salt into India has been twice reduced within the last three years. On the 18th October, 1844, it was ordered by the Supreme Government to be reduced from 3 $\frac{1}{4}$  rupees (6s. 6d.) to 3 rupees (6s.) per maund of 82 $\frac{2}{7}$  lbs. avoirdupois. On the 31st March, 1847, it was further reduced to 2 $\frac{3}{4}$  rupees, or 5s. 6d., per 82 $\frac{2}{7}$  lbs. At the previous period the Government store-salt in Bengal was directed to be sold *wholesale* at prices varying, according to the reputation of the salt at the ten places of manufacture\*, from 356 rupees per 100 maunds (8,228 $\frac{4}{7}$  lbs.) of Madras salt to 400 rupees for Cuttack salt. On the 31st March, 1847, the prices were further reduced to 331 rupees and 375 rupees per 100 maunds for the salt of the same places respectively, and the Government pledged itself not to alter these prices before the 1st April, 1849. It is thus seen that the wholesale price of the Madras salt was about 25 lbs. per rupee, or 12 $\frac{1}{2}$  lbs. for 1s., or something less than 1d. per lb., and that of Cuttack salt about 20 $\frac{1}{2}$  lbs. per rupee. At Calcutta, therefore, the retail price (5 $\frac{3}{4}$  lbs.) of the best salt was four times that of the wholesale price; and generally in the Bengal Provinces, excepting at Cuttack and Chittagong, where the market *retail* price was *lower* than the Government *wholesale* price, (strange as it may appear,) the profits to the wholesale purchaser must have been very considerable indeed. But in case we look to prices in the North-Western Provinces, Bundelcund, Malwa, and our newly-acquired provinces beyond the Sutlej in the Punjab, the anomalous and startling fact presents itself that the *retail* prices, with few exceptions, are below the *wholesale* prices in Bengal, showing that there is a source of supply independent of the Government sales. For instance, at sixteen stations from Calcutta to Allahabad, (always excepting Cuttack and Chittagong,) the average retail price of the best salt is 12 $\frac{4}{7}$  lbs. for 2s., a little more than half the wholesale price of Cuttack salt, 20 $\frac{1}{2}$  lbs.; but beyond the limits of Allahabad, at twenty-nine stations, the average retail price is 23 $\frac{4}{7}$  lbs., while the wholesale price at which Cuttack salt was put up by Government was only 20 $\frac{1}{2}$  lbs. for 2s. Nagpoor is supplied from the western coast of India; and on the 30th July, 1846, the price of salt was 30 $\frac{2}{16}$  rupees per kundee of 611 lbs. avoirdupois, giving not quite 20 lbs. per rupee; Nagpoor, therefore, could not have been the channel of supply. But at Kheir, in the

\* Hedgillce, Tumlook, 24 Pergunnahs, Chittagong, Arracan, Kurra, Cuttack, Balasore, Khurdah, Madras.



Poona collectorate, under the Bombay Government, the following are the prices of salt in the respective years:—

	Local Seers.	Indian Seers. Tolas.
1840 .....	34 .....	43 28
1841 .....	32 .....	40 64
1842 .....	33 .....	42 8
1843 .....	30 .....	38 20
1844 .....	31 .....	39 22
1845 .....	24 .....	30 48

The average is nearly 35 Indian seers per rupee, or 72 lbs. avoirdupois, instead of  $20\frac{1}{2}$  lbs., as in Bengal, and 20 lbs. as at Nagpoor, or  $23\frac{4}{7}$  lbs., as in the North-Western Provinces; the western coast no doubt, therefore, supplies Central India and Bundelcund to some extent, but the North-Western Provinces are probably supplied from the salt-beds of the Punjab, or from the salt lakes of Ajmere. It is right here to state that the salt tax in the North-Western Provinces is levied as a customs' duty only.

Very much has been written regarding the pressure of the salt monopoly upon the people of *India*, and the above facts and prices afford the means of putting the value of the assertion to a practical test; and for fixing the real portion of a man's wages which he is compelled to expend upon salt as a necessary of life. In the first place the so-called monopoly is confined to Bengal, where the average retail price of the *best* salt is about  $20\frac{1}{2}$  lbs. per rupee. Various native authorities concur in stating that a single man consumes one seer of salt (14,400 grains,) per month, but that a family average about three-quarters of a seer (10,800 grains). In the gaols of the North-Western Provinces a convict is allowed 225 grains per diem, which, for thirty days, is 450 grains less than half a seer, and is 250 grains less than one pound avoirdupois, and it is looked upon as ample. But taking three-quarters of a seer per head (10,800 grains), or even one seer (14,400 grains), the rupee's worth of the *best* salt, which the poor do not consume, would last a man, in the first case,  $13\frac{1}{3}$  months, and in the second case, 10 months; and as the average wages of an agricultural labourer are 3 rupees, or 6s. per month, and all other classes have higher wages, it results that one-third of a month's wages supplies a man's salt for  $13\frac{1}{3}$  months, at 10,800 grains, or three-quarters of a seer per month, or at the allowance of one seer per month, two shillings' worth of salt lasts him ten months; three-quarters of a seer per month costing him about the fourth of a farthing per diem, and one seer, costing a scarcely appreciable fraction more. And yet it has been deliberately asserted in print, for selfish purposes, that a year's salt for a labourer costs him three months' wages. But if the Kheir average price of 35 seers per rupee be used, then 35 seers will last a man thirty-five months, at a cost of  $\frac{7}{10}$ ths of a penny per month, or 0.025 of a penny per diem; and a glance at the Tables VII. and VIII. will show that two shillings' worth of salt at many places in the North-Western Provinces will last a man from eight to twenty-three months. At Calcutta the retail price of  $5\frac{3}{4}$  lbs. is 2s., (although it is shown the Government sell  $20\frac{1}{2}$  to 25 lbs. for 2s.,) no doubt presses severely upon a poor man, for a third of a month's wages, or 2s., would supply him with

only three months' salt, instead of thirty-five, eighteen, or ten months' salt, as elsewhere, but this must be the price of refined salt, which of course is not used by the poor. This severe pressure, however, exists only in Calcutta, and is to be attributed to the cupidity of the retailers, and not to the Government. In Bombay, from an invoice of 200 tons of salt in July, 1845, of Messrs. Nicol and Co., sent to Calcutta, the cost to them, including excise duty of 1s. 6d. per 82 $\frac{2}{7}$  lbs., and carriage from Tanneh to Bombay by water, was 2s. 5 $\frac{3}{4}$ d. per cwt.; there were, therefore, 45 seers, or 92 $\frac{4}{7}$  lbs. for 2s., and a third of a labourer's monthly wages at 3 rupees per mensem, would supply him with salt for forty-five months. The wholesale price of salt in London varied in the years 1844 and 1845 from 37s. (coarse) to 45s. (fine) per ton, and in 1846 and 1847 from 35s. (coarse) to 47s. (fine) per ton.

The following table exhibits the final results of prices in contrast:—

	Wheat, per Quarter.	Rice, per cwt.	Gram, per Quarter.	Flour, lbs. per Rupce.	Peas, or Dhall, per Quarter.	Jowaree, per Quarter.	Bajra, per Quarter.	Sugar, per cwt.	Salt, per cwt.
	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.	s. d.
London, Nov., 1846	57 0	22 0	..	11	52 0	..	..	$\left\{ \begin{array}{l} 53\ 0 \\ 49\ 0 \\ 45\ 0 \\ 50\ 0 \end{array} \right\}$	..
London, June 1st, 1847... ..	102 0	24 6	..	..	68 10	..	..	49 6	..
Bengal, 53 markets, 1845 and 1846 .....	16 8	$\left\{ \begin{array}{l} 4\ 11 \\ \text{to} \\ 8\ 9\frac{1}{2} \end{array} \right\}$	14 9	31	23 6	..	..	..	$\left\{ \begin{array}{l} 9\ 0 \\ \text{to} \\ 10\ 11 \end{array} \right\}$
Bengal imports by sea .....	..	..	..	..	..	..	..	..	11 4
Deccan, averages of 19 years ....	14 11	6 2 $\frac{1}{2}$	15 11	..	..	9 6	11 7	..	3 1
Saugor, averages of 3 years .....	$\left\{ \begin{array}{l} 5\ 6 \\ \text{to} \\ 7\ 6\frac{3}{4} \end{array} \right\}$	4 4 $\frac{1}{2}$	7 7 $\frac{1}{2}$	..	..	..	..	..	..
Nagpoor, averages of 3 years .....	10 10	$\left\{ \begin{array}{l} 3\ 9 \\ \text{to} \\ 5\ 11 \end{array} \right\}$	13 1	..	12 2	8	12 7	..	9 1 $\frac{1}{2}$
Goojrat, averages of one year of scarcity .....	17 11	4 3	28 0	..	..	13 5	16 11	..	..
Hushungabad, averages of 16 years .....	10 8 $\frac{1}{2}$	4 1 $\frac{1}{2}$	7 11	..	..	..	..	..	..
London, 18th June, 1847 .....	92 2	$\left\{ \begin{array}{l} 34\ 0 \\ 20\ 6 \\ 35\ 0 \\ 15\ 0 \end{array} \right\}$	..	..	58 6	..	..	$\left\{ \begin{array}{l} 46\ 0 \\ 53\ 0 \\ 35\ 0 \\ \text{to} \\ 46\ 0 \end{array} \right\}$	$\left\{ \begin{array}{l} 1\ 9 \\ \text{to} \\ 2\ 4\frac{1}{2} \end{array} \right\}$
Bombay, 1845 .....	..	..	..	..	..	..	..	..	2 5 $\frac{1}{2}$
Cuttack .....	..	..	..	..	..	..	..	..	4

I annex Messrs. Nicol's invoice of salt from Bombay, and for record and comparison add the contract prices of the supplies to the East India Company's Military College at Addiscombe\*.

\* Since the above was written Lieut. Burke, of the Bombay Engineers, in an Official Report to Government, describes a superficial deposit of good salt upon the



It now remains to consider whether the prices given of the cerealia in India offer sufficient inducement to the speculator, in seasons of scarcity in Europe, to look to India for supplies. *Primâ facie* the case is conclusive from the comparatively remarkable cheapness of grain and pulse in India; but the element of the cost of transit from India to England must now be taken into consideration; and this will be best done by putting it into juxtaposition with the cost of the freight of wheat from the most distant sources of supply in Europe, namely, Odessa and Alexandria. The following statement is from the information of a gentleman in Mark Lane, of great experience in the corn trade. Another consideration also is the loss occasioned by the destruction of the grain by weevils in transit.

“The price of fine Polish Odessa red wheat at Odessa, free on board, in ordinary years is from 25s. to 32s. per quarter. This corn weighs from 60½ to 61½ lbs. per bushel. Freights from Odessa to London are from 6s. 6d. to 8s. 6d. or 9s. per quarter. The ordinary duration of the voyage is two months. This year (1847) some vessels have been four months on the passage, and some only six weeks.

“At Alexandria the price in ordinary years is from 18s. to 25s. per quarter, free on board; weight 56 to 59 lbs. per bushel; freight 6s. to 7s. per quarter. The duration of the voyage much the same as from Odessa, the principal detention being at the Gut of Gibraltar.

“The prices would doubtless be brought down by plentiful harvests at home, and free access to all the world for wheat.

“It is believed that the weevil is bred within the grains of the wheat, the egg being deposited at some period during the formation of the grain; for the insect has often been found in the middle of grains which were on the outside perfectly sound. After the insect has eaten its way out of its native grain, no doubt it proceeds to attack others. It has also been seen in flour brought from India in a metal canister hermetically sealed.

“That the length of the voyage does not produce the weevil is proved by the fact that cargoes of wheat come from Australia perfectly free from it and in the finest possible condition, although often nine months on board; and the wheats of Australia fetch the very highest prices in the English markets.

“The wheats of Poland brought from Odessa are rarely infected with weevil, so also those from the ports of the Baltic. When it occurs in these it is to be traced to mismanagement, such as storing the grain in foul warehouses, &c.

“But the wheats from Turkey, Egypt, the Italian States, and Spain, are almost invariably attacked with weevils. In some cases of great neglect the insect has eaten half the weight of the grain.

“Wheats from the Baltic, when they arrive ‘out of condition,’ are hot and moist. The heat seems to arise from a vegetable fermentation occasioned by the damp state in which the grain must have been gathered and put into bulk. But those from the Mediterranean when

Cutch frontier of Scinde near Lucput Bunder, capable of supplying one hundred millions of people for above 1600 years at 20 lbs. per head per annum. This salt could be delivered at Bombay at 5s. per ton, while Cheshire salt put on board ship at Liverpool, is 12s. per ton.

hot (and they are *very* hot,) are dry. The heat is dissipated at once by the mere act of separation in the process of unloading, but it immediately returns on the grain lying again in bulk. It apparently arises from the quantity of animal life in the grain.

“When grain is received in the last-mentioned state it is put into conical heaps. The weevil always seeks the top; in due time, therefore, the top of each cone is taken off, and with it the greater part of the weevil. This process and the previous ravages of the insect of course destroy much valuable grain.

“From comparisons of the wheats grown in different countries it is inferred that the weevil is produced most plentifully, if not exclusively, in wheats grown in a climate which is unduly dry.

“Supposing the above view of the origin of the weevil to be accurate, it is not believed that the substitution of threshing-machines for the bullocks and earthen floors used in India would remedy this evil, although they would improve the article in other respects; and it is also thought that insect life, while in the egg, will endure without destruction any heat to which the grain can be safely subjected.

“American wheats, of which till this year, 1847, little has been imported, do not stand high in the estimation of English millers; they do not like the soil on which they are grown. Little has been done with them in ordinary years to supply trustworthy facts as to costs and freights.

“Indian wheats, if they can be brought over in good condition, are likely to be much approved.”

Such are the opinions of a trustworthy and experienced person; and if the lowest price stated of Odessa wheat be taken, 25s. per quarter, and the lowest rate of freight, 6s. 6d. per quarter, then a ton of wheat would be introduced into England at a cost of 116s. 8d. for the cost price of the wheat, and 30s. 3d. for freight, making a total cost per ton of 146s. 11d. Freights from India vary excessively; but assuming a very high freight of £5, or 100s. per ton, and taking the average of all the averages of the price of wheat in the preceding tables, name 13s. 1d. per quarter, or 61s. per ton, then the cost of a ton of Indian wheat landed in England would be 161s., and in ordinary seasons it would not be worth a speculator's while to import it from India. But with respect to other grains, some of which are three or four times cheaper than wheat, the same objection would not exist, and they might be imported to a great profit, even in ordinary seasons, could a taste for them be induced. But in seasons of scarcity like that of the past year, when the price of wheat has varied in the London market from 57s. per quarter, (266s. per ton, in November, 1846,) to 102s. per quarter, (476s. per ton, on January 1st, 1847,) then India may be looked to with confidence for a supply, rendering large profits to the importer; India having the advantage also of ripening its grain crops in January and February, five months before those of Europe are available. It may be objected that a larger demand upon India would greatly raise prices, and probably permanently so; but my reply to this objection is, that about two-fifths of the whole fertile soil of India are at present untilled, and would necessarily be brought into cultivation to meet an increased demand for cereal supplies.



TABLE I.

*Annual Average of Local Seers of Grain per Rupee of Two Shillings at Seven Localities in the Collectorates of the Deccan, from the Year 1827 to 1845, both inclusive.*

	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	1837	1838	1839	1840	1841	1842	1843	1844	1845
<b>WHEAT.</b>																			
Sewnere .....	22	32	27	28	28	21½	23	28	32	32	44	34½	26	28½	33	24½	32	26	13
Brahmunwaree	23	32	26	30	26	13	23½	29	25	32	36	28½	22½	23	23	31	35	24½	12½
Paubul .....	30	32	23	22	32	16½	16½	32	21½	25	23	28	22	20	20	24	24	20	13½
Poorundhur ..	25	26½	26½	24	28	22½	22½	21½	25	27	31½	21	20½	25	23	29	32	24	16
Indapoor .....	21	30	23½	25	24	17	16	22½	25	30	34	21	21	25	29	25	24	25	14½
Kulus .....	24	22½	30	30	28	24	17	30	28	36	42	36	23	38	29	20	25	25	13
Mawul .....	..	..	..	..	21½	16½	18½	22	26	30	26	30	18	20	24	23	30	20	12
<b>RICE.</b>																			
Sewnere .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brahmunwaree	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Paubul .....	19	21	17	23	16	12	13	22	22	16	16	15	16	14	11	16	16	18	13
Poorundhur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Indapoor .....	9	10½	10	9½	9½	9	10	12	10½	11½	9½	9½	10	13	13	13	12	12	8½
Kulus .....	11	10	9	10	10	11	13	11	15	14	15	13	14	13	14	12	14	15	12
Mawul .....	..	..	..	24	22	24	17½	24	22	18	24	23	15	19	21	21	22	19	..
<b>GRAM.</b>																			
Sewnere .....	29	40	37	29	26	32	24	30	32	40	42	34½	18	28½	34	36	37	25	12
Brahmunwaree	28½	36	28	28	21½	17	23½	26½	28	34	36	25½	20	24	35	31	36½	24½	12
Paubul .....	24	36	29	18½	19	13½	14	16	20	30	26	33	20	20	20	24	24	20	13
Poorundhur ..	23	27½	22½	22½	24	20½	21½	19½	23½	32	32½	21	16½	24½	20	32	32	24	13½
Indapoor .....	24	22	29	25	13	13½	18	20	19	42	34	18	19	17	28	25	30	24	12
Kulus .....	18	18	14	16	15	18	19	18	15	16	20	22	24	24	30	31	22	26	12
Mawul .....	..	..	..	22	18	19½	18	22	26	33	28	25	16	17	24	22	31	23	12
<b>BAJRA.</b>																			
Sewnere .....	27½	42	26	31½	33	22	36	32	32	34	40	21½	32	39	32	36	32	26	16
Brahmunwaree	26	36	30½	37	31	20½	34½	34	33½	29	40	25	31	36	31½	38	36½	25½	17
Paubul .....	33	46	44	44	40	18	22	40	37	32	38	34	32	33	32	37	37	24	16
Poorundhur ..	32	37½	34	26	30	22½	32½	30½	30	32	31½	27½	27½	33	29½	41	40	28½	17
Indapoor .....	30	54	42	38	32	18	38	42	40	44	58	29	38	46	44	54	36	25	15½
Kulus .....	32	64	40	36	44	25	35	56	36	44	54	34	44	48	48	40	54	29	17
Mawul .....	..	..	..	31½	27	20	18½	26½	28	28	27	30	20	28½	23	28	34	22	..
<b>JOWAREE.</b>																			
Sewnere .....	32	44	..	32	40	36	39	36	..	32	34	38	36	38	43	44	48	30	18½
Brahmunwaree	30	34	31½	44	38	20½	44½	48	40½	33	54	34	36	38	34	44	48	28½	17½
Paubul .....	44	48	48	40	38	23	24	44	39	36	40	46	36	36	40	44	44	28	19
Poorundhur ..	36	40	36	32	34	27½	38½	34½	32½	36	41½	29½	30½	36	35	50	50	32½	19½
Indapoor .....	38	56	46	42	40	21	44	46	46	62	68	42	50	48	62	76	50	29	17
Kulus .....	36	80	56	60	56	26	52	56	52	56	72	52	46	66	52	56	80	30	20
Mawul .....	..	..	..	40	33	33	31	36	34	32	37	25	20	32	38	38	37	28	..

TABLE II.

*Average Prices of Bread Stuffs, Rice, and Gram at Seven Markets in the Collectorates of the Deccan, from the Years 1827 to 1845, both inclusive; together with the Weight Avoirdupois for Two Shillings, and the Price per Quarter English.*

	1827.	1828.	1829.	1830.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	Average Seers.	Avoirdupois.	Prices per Quarter.
Wheat .....	29 $\frac{4}{6}$	36 $\frac{1}{6}$	31 $\frac{5}{6}$	34 $\frac{3}{6}$	32 $\frac{5}{6}$	22 $\frac{4}{6}$	23 $\frac{6}{6}$	33 $\frac{4}{6}$	32	36 $\frac{5}{6}$	42	34 $\frac{4}{6}$	26 $\frac{5}{6}$	31 $\frac{2}{6}$	32 $\frac{2}{6}$	32 $\frac{5}{6}$	35 $\frac{2}{6}$	28 $\frac{2}{6}$	16 $\frac{5}{6}$	31 $\frac{5}{19}$	lbs. oz. 64 5	s. d. 14 11
Rice .....	15 $\frac{5}{6}$	17	14 $\frac{1}{3}$	20 $\frac{1}{4}$	17 $\frac{3}{4}$	17	16 $\frac{1}{4}$	20 $\frac{1}{4}$	21 $\frac{1}{4}$	18 $\frac{2}{4}$	18 $\frac{3}{4}$	18 $\frac{2}{4}$	16 $\frac{3}{4}$	18	18	19 $\frac{3}{4}$	19 $\frac{3}{4}$	19 $\frac{2}{4}$	13 $\frac{3}{4}$	17 $\frac{1}{16}$	36 13	$\left\{ \begin{array}{l} 0 \frac{7}{10} \\ \text{per lb.} \\ 6 \frac{2}{3} \end{array} \right.$ per cwt.
Gram .....	30	36 $\frac{1}{6}$	32 $\frac{4}{6}$	28 $\frac{1}{6}$	23 $\frac{5}{6}$	23 $\frac{2}{6}$	24 $\frac{1}{6}$	26 $\frac{5}{6}$	28 $\frac{2}{6}$	39 $\frac{4}{6}$	38 $\frac{4}{6}$	31 $\frac{3}{6}$	23 $\frac{2}{6}$	27 $\frac{1}{6}$	33 $\frac{4}{6}$	34	37 $\frac{1}{6}$	29 $\frac{1}{6}$	15	29 $\frac{12}{19}$	60 5	15 11
Bajra .....	34 $\frac{5}{6}$	56 $\frac{5}{6}$	43 $\frac{5}{6}$	42 $\frac{2}{6}$	41 $\frac{1}{6}$	25 $\frac{3}{6}$	37 $\frac{5}{6}$	45 $\frac{1}{6}$	41	42 $\frac{1}{6}$	50 $\frac{3}{6}$	35 $\frac{1}{6}$	39 $\frac{2}{6}$	46	41 $\frac{5}{6}$	46 $\frac{2}{6}$	47	31 $\frac{2}{6}$	20	40 $\frac{7}{19}$	82 10	11 7
Jowaree .....	44 $\frac{1}{6}$	66 $\frac{2}{6}$	52 $\frac{2}{6}$	51 $\frac{1}{6}$	48 $\frac{5}{6}$	32 $\frac{2}{6}$	47 $\frac{4}{6}$	52 $\frac{2}{6}$	42 $\frac{2}{6}$	50 $\frac{1}{6}$	60 $\frac{5}{6}$	46 $\frac{5}{6}$	45 $\frac{2}{6}$	51 $\frac{3}{6}$	53 $\frac{2}{6}$	61 $\frac{4}{6}$	62 $\frac{2}{6}$	35 $\frac{5}{6}$	23	48 $\frac{16}{19}$	100 8	9 6

The Seers are reduced from the Local Seers in Table I. to Indian Seers of 14,400 grains avoirdupois each.



*Extract from a Letter of Colonel Sleeman to J. Chapman, Esq., dated Jhansae, 24th July, 1846.*

"A Memorandum of Prices of Grain, &c., is inclosed. The prices of grain in the Saugor districts is influenced chiefly by the external demand from Khandeish (S.W.), Nagpore (S.), and Bundelcund (North). In the Nerbudda valley, districts of Jubulpore, Nursingpore, and Hoshungabad, the price in 1845 varied from 45 seers, wheat and gram, the rupee, (Company's rupees, and 80 to the seer,) to 65; but in the beginning of 1846 the price of wheat and gram rose to 13 seers only for the rupee in Hoshungabad from the increased demand from Indore and Khandeish. The harvests have been even better than ordinary, and promised to be so when prices rose; and had not the crops in Khandeish failed the prices must have fallen from 60 to 80 or 100 seers the rupee, for gram, and from 55 to 75, or 95, wheat. Wheat generally sells about 5 seers the rupee dearer than gram when both are cheap; the difference lessens as prices rise generally, and sometimes gram sells even dearer than wheat."

TABLE III.—Average Prices of Grain in the Saugor and Nerbudda Territories for Three Years, sold on Company's rupees, from 1843.

	1843.				1844.				1845.				1846*.			
	Wheat.		Gram.		Wheat.		Gram.		Wheat.		Gram.		Wheat.		Gram.	
	M. S.	CH.	M. S.	CH.	M. S.	CH.	M. S.	CH.	M. S.	CH.	M. S.	CH.	M. S.	CH.	M. S.	CH.
Saugor .....	1 29	13 $\frac{1}{2}$	1 27	7	1 26	7 $\frac{1}{2}$	1 22	1	1 1	15	1 2	1 $\frac{1}{2}$	0 26	4	0 27	8
Dumoh .....	1 23	6	1 38	2	1 27	10	1 30	6 $\frac{1}{2}$	1 0	13	1 5	7 $\frac{1}{4}$	0 26	0	0 30	0
Jubulpore .....	1 34	13 $\frac{1}{4}$	1 29	13	2 9	9 $\frac{1}{2}$	2 29	13	1 13	12 $\frac{1}{4}$	1 26	15	0 21	12 $\frac{1}{4}$	1 3	5
Seonee .....	1 34	9 $\frac{1}{4}$	1 35	11 $\frac{1}{2}$	1 39	14 $\frac{1}{2}$	1 28	4	0 32	13 $\frac{1}{2}$	0 36	1 $\frac{3}{4}$	0 23	8 $\frac{1}{4}$	0 32	13
Nursingpore .....	1 29	6 $\frac{3}{4}$	1 11	6 $\frac{1}{2}$	2 7	1	2 14	14 $\frac{3}{4}$	0 24	1 $\frac{1}{4}$	1 5	7 $\frac{1}{2}$	0 29	5 $\frac{1}{4}$	1 5	10
Hoshungabad	1 26	8 $\frac{1}{4}$	1 12	10 $\frac{1}{4}$	1 37	0	1 37	2 $\frac{1}{4}$	0 20	4	1 4	14 $\frac{1}{2}$	0 16	1	0 23	0
Baitool .....	2 1	1 $\frac{1}{2}$	1 19	10 $\frac{1}{4}$	1 37	8 $\frac{1}{2}$	1 29	8	0 22	4 $\frac{1}{2}$	0 37	14 $\frac{1}{2}$	0 17	11 $\frac{1}{2}$	0 21	0

\* This was in the beginning of the year. Prices rose afterwards 50 per cent from scarcity.

The maund is of 40 seers of 80 Company's rupees each, = 82 $\frac{7}{8}$  lbs. avoirdupois.

The rupee used in Saugor and Dumoh is the Company's; that current in all the other districts is the Nagpore rupee; but the rates here given are for the Company's rupee in all the districts.

(Signed) W. H. SLEEMAN.

TABLE III\*.

Reduced Average Statement of Prices of Grain in the Saugor and Nerbudda Territories, beginning 1843. From a Table, No. III., by Colonel Sleeman, expressed in Maunds, Seers, and Chittacks, per Company's Rupee; the values given here in Pence per Ton.

Names of Districts.	Price per Quarter English of Wheat in 1843.	1843.			1844.			1845.			1846*.		
		Wheat.	Gram.	Rice.	Wheat.	Gram.	Rice.	Wheat.	Gram.	Rice.	Wheat.	Gram.	Rice.
		Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.	Pence per Ton.
Saugor .....	6 6	358.578	371.373	....	376.785	403.542	....	597.185	594.968	....	954.074	910.707	....
Dumoh .....	6 8	395.178	320.569	....	370.343	355.430	....	613.646	551.126	....	963.248	834.815	....
Jubulpoor .....	5 10	334.693	358.739	946.172	279.533	228.065	1019.621	465.808	374.047	1151.137	687.326	578.227	1178.562
Seonee .....	5 11	335.815	330.756	707.970	313.423	366.851	762.533	693.571	688.803	1065.013	736.259	763.259	1331.265
Nursingpore ....	6 5	360.759	487.177	1001.777	287.660	263.857	1040.109	550.805	483.221	853.939	791.919	548.919	1529.434
Hoshungabad.....	6 8	376.518	475.761	1050.297	325.253	324.660	1237.374	557.705	555.771	1559.190	1017.033	1088.885	1788.889
Baitool .....	5 6	308.843	419.921	872.059	323.024	360.353	1097.839	681.482	660.694	1413.441	1192.591	1192.590	1788.889
Average price } per ton in } pence .....	6 4	353.000	395.000	916.000	325.000	329.000	1031.000	594.000	558.000	1208.000	....	....	....

\* This was in the beginning of the year. Prices rose afterwards 50 per cent from scarcity.



TABLE III\*\*.

*Statement (in Pence per Ton) of the Average Price of Wheat in the Districts of the Saugor and Nerbudda Territories, from the Year 1831 to 1840, A.D. Reduced from the Statement of the Commissioner, dated 6th December, 1841.*

Names of Districts.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.	Rate per Ton in Pence.
	30th May, 1831.	30th May, 1832.	30th May, 1833.	30th May, 1834.	30th May, 1835.	30th May, 1836.	30th May, 1837.	30th May, 1838.	30th May, 1839.	30th May, 1840.	
Saugor .....	938·433	1138·383	1006·812	yr. of famine	911·743	716·196	631·041	1022·222	909·673	781·875	
Dumoh .....	683·807	710·480	750·395	927·578	770·579	676·877	676·877	1001·777	945·073	945·073	
Jubulpoor .....	782·638	1473·201	663·117	1192·592	758·922	659·064	715·555	834·815	715·555	782·638	
Seonee .....	560·632	657·972	919·062	1053·123	799·423	714·280	602·800	657·982	471·980	545·928	
Hoshungabad .....	912·781	963·247	1340·170	1046·243	1046·243	554·234	603·480	676·878	715·555	681·481	
Baitool .....	451·760	843·602	yr. of famine	831·35	874·948	441·312	481·624	405·168	604·390	574·908	
Pence per Ton, Average .....	721·6	964·5	935·9	1010·000	860·000	627·000	618·5	766·5	727·000	719·000	

The average of the whole was 795 pence per ton, or 10s. 6d. per quarter.

TABLE IV.

*Price Current of Wheat, Gram (Chenna), and Rice, as by the Nerikk Namehs, kept in the Office of the Principal Assistant Agent of the Governor-General.—Hoshungabad.*

Reduced from the original table sent to me by Colonel Ouseley, at the rate of 444·34 lbs. avoirdupois per Mancee, and 19 $\frac{3}{4}$  pence per Nagpore rupee.

J. CHAPMAN.

Years.	November, or Sowing Time.			June, or Storing Time after Harvest.		
	Pence per Ton.			Pence per Ton.		
	Wheat.	Gram.	Rice.	Wheat.	Gram.	Rice.
	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>
1822–23	661·159	612·415	1144·972	497·814	398·251	1194·753
1824 ....	429·364	298·688	696·939	336·024	273·793	846·283
1825 ....	441·810	317·356	1527·666	322·023	217·793	1508·998
1826 ....	280·016	199·125	790·279	264·463	196·014	936·512
1827 ....	311·134	238·017	908·510	466·700	379·583	1040·742
1828 ....	448·032	454·255	821·393	406·548	311·134	954·143
1829 ....	405·511	331·876	772·648	541·372	336·024	790·279
1830 ....	705·236	491·591	962·440	392·028	348·470	1059·928
1831 ....	320·467	317·356	772·648	423·142	421·067	920·955
1832 ....	414·845	376·472	759·166	1062·003	514·408	1028·815
1833*....	1071·337	575·597	1086·894	1294·316	696·939	1609·598
1834†....	1335·800	829·690	1539·074	766·944	588·042	1611·672
1835 ....	796·502	597·377	1057·854	908·510	659·604	1213·421
1836 ....	725·979	538·780	902·288	502·481	369·212	957·254
1837 ....	647·936	449·588	964·514	535·798	365·063	925·104
1838 ....	583·894	460·478	1077·300	572·456	442·458	1140·823
Average	598·000	443·000	986·000			

The fluctuations are entirely owing to good and bad harvests.

\* No rain in 1833.

† Famine prices.



## Memorandum.

“The hire of a loaded cart, carrying  $6\frac{1}{2}$  or 7 maunds (576 lbs. avoirdupois), from Bombay to Nagpore, or from Nagpore to Bombay, is 50 rupees (£5, or £4 2s. 3d. Nagpore currency), it will travel 6 or 7 coss (12 to 14 miles) per diem, and arrives in 40 days. A return hackery (cart) going back empty will make the journey in 28 or 30 days.

“The hire of a loaded bullock, carrying 1 maund ( $82\frac{2}{7}$  lbs.), is 7 rupees (or 14 shillings, or 11s.  $6\frac{1}{4}$ d.), for going and returning from Nagpore to Bombay, it will travel 5 coss (10 miles) per diem.”

TABLE V.—List of Average Rates of Grain, &c., at Nagpore, during the Years 1843, 1844, and 1845.

GRAIN.	1843.	1844.	1845.	REMARKS.
	Rate per Rupee.	Rate per Rupee.	Rate per Rupee.	
	Seers.	Seers.	Seers.	
Wheat .....	55	46	$29\frac{1}{2}$	80 rupees weight a seer, and 200 seers make one khundee, con- taining 160 paillies, and $1\frac{1}{4}$ seers make one paillie.
Chenna, ( <i>Cicer arietinum</i> )....	40	$38\frac{1}{2}$	$28\frac{1}{2}$	
Jowaree, ( <i>Holcus sorghum</i> )....	$62\frac{1}{2}$	$58\frac{3}{4}$	43	
Moong, ( <i>Phaseolus moong</i> )....	40	$43\frac{1}{4}$	$28\frac{1}{2}$	
Mussoor, ( <i>Erum lens</i> ) .....	50	$56\frac{3}{4}$	$31\frac{3}{4}$	
Buttana, ( <i>Pisum sativum</i> ) ....	40	$42\frac{3}{4}$	33	
Bajra, ( <i>Panicum spicatum</i> )..	40	$38\frac{3}{4}$	31	
RICE, of different sorts.				
Ramkail, .....4th sort ....	35	28	24	
Pissoor, .....3rd ,, ....	30	$24\frac{3}{4}$	$21\frac{3}{4}$	
Chuttree, .....2nd ,, ....	$22\frac{1}{2}$	21	19	
Kallee Kumode, 1st ,, ....	20	$18\frac{3}{4}$	$17\frac{1}{4}$	
Good Rice, for Gentlemen....	16	$15\frac{1}{4}$	$13\frac{3}{4}$	
DHALL, of different sorts.				
Toor Dhall, split peas, ( <i>Cy- tusus cajan</i> ) .....	35	$29\frac{1}{2}$	$23\frac{1}{2}$	
Moong, ditto, (split) .....	40	$35\frac{1}{4}$	$25\frac{1}{2}$	
Mussoor, ,, ,, .....	40	$39\frac{1}{4}$	$26\frac{1}{4}$	
Chenna, ,, ,, .....	30	$26\frac{3}{4}$	20	

The fluctuation in the prices of grain is caused by the variable fall of rain in the Monsoon.

Nagpore,  
30th July, 1846.

(Signed)

ALEX. SPIERS,  
Resident.

TABLE VI.—Statement of the Prices of the principal Edible Grains shown in the number of Indian Seers per the Rupee in the Bazars of Goojrat, and in Tanna, Candeish, and Colaba, for the period ending 15th August, 1846. The period being one in which the Monsoon failed, and scarcity resulted.

ZILLAH.	Rice.			Wheat.			Jowaree.			Bajra.			Gram.			REMARKS.
	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	
Ahmedabad	S. T. 25 57 30 60 21	S. T. 60 21 1 27	S. T. 1 27 6 35 70 24	S. T. 6 35 70 24	S. T. 1 27 6 35 70 24	S. T. 0 34 78 46 10 26 52 27	S. T. 0 34 78 46 10 26 52 27	S. T. 0 34 78 46 10 26 52 27	S. T. 0 34 78 46 10 26 52 27	S. T. 0 34 78 46 10 26 52 27	S. T. 0 34 78 46 10 26 52 27	S. T. 0 34 78 46 10 26 52 27	S. T. 1 16 72 25 50 12	S. T. 1 16 72 25 50 12	S. T. 1 16 72 25 50 12	{ Rice, the average of 11 Markets. The rest " 14 " The whole of the second quality used for general consumption. Rice, the average of 6 Markets. Gram " 7 " The rest " 8 " Sootsural rice and Wanjea wheat are given in this Zillah. The average of 5 Markets. Bajra, the average of 8 Markets. Jowaree " 9 " Gram " 11 " The rest " 12 " Wadea rice is given, also the se- cond quality of grain. Jowaree the average of 1 Market. The rest of " 5 " Coarse rice is given in this Zillah. The average of 17 Markets. The whole of the second, or quality used for general consumption. The average of 2 Markets.
Khaira .....	16 63 20	0 14 40 22	53 25 0 21	0 33 50 44	0 28 0 30 60 32	40 29 0 16 46 20	0 15 0									
Broach .....	27 16 34	40 21 40 12	68 14 20 11	20 27 0 29	0 24 0 23 4 26	0 21 0 11 72 13	20 11 0									
Surat .....	21 18 24	0 18 40 13	77 15 60 11	40 25 76 29	60 22 0 20 0 21	60 14 60 13	25 15 20 11	0								
Tanna .....	18 65 20	72 17 26 12	51 16 16 11	20 17 44 17	44 17 44 17	44 17 10 18	0 15 16 12	31 14 35 11	20							
Candeish ....	12 58 20	0 10 9 18	75 23 0 14	36 29 23 36	54 22 0 25 14 33	0 20 54 16	53 20 0 13 36									
Colaba .....	19 26 20	12 18 41 11	47 12 79 10	15 ....	....	....	....	12 39 13	47 11 31							

Revenue Commissioners' Office, Poona,  
9th September, 1846.

The Seer S. is of 14,400 grains Avoirdupois and the Tolla T. is of 180 grains.



TABLE VII.—Price Current of Grain, Provisions, &amp;c., at the

Stations.	Sicca weight per Seer.	Wheat.	Rice.		Gram.		Barley.	Dhall.	Salt.	
			1st Sort.	3rd Sort.	1st Sort.	2nd Sort.			1st Sort.	2nd Sort.
			Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.
		M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.
Presidency .....	80	..	0 10 0	1 4 0	0 30 7 $\frac{1}{2}$	..	..	..	0 2 13	0 8 10 $\frac{1}{2}$
Cuttack .....	80	..	..	..	..	..	..	..	0 24 0	..
Berhampore .....	80	0 30 0	0 16 0	0 27 8	0 32 0	0 33 0	0 33 8	0 28 0	0 7 11	0 8 0
Dacca .....	80 $\frac{1}{2}$	0 28 2	0 30 0	0 35 0	0 30 0	0 32 0	..	0 23 8	0 8 0	0 8 8
Chittagong .....	80	0 33 0	0 40 0	1 10 0	0 28 0	0 30 0	0 36 0	..	0 15 0	..
Assam .....	80	..	..	1 0 0	..	..	..	0 20 0	0 6 8	0 6 8
Chirrapoonjic .....	80	..	0 30 0	1 0 0	0 15 0	..	..	..	..	..
Dinapore .....	80	0 29 14 $\frac{1}{2}$	0 13 0	2 27 12	0 35 6	..	0 38 12	..	0 7 8	0 7 12
Hazareebaugh .....	80	0 22 0	0 15 0	0 22 0	0 20 0	..	..	..	0 3 8	0 4 0
Dorundah .....	80	0 17 6	0 16 0	0 20 0	0 17 0	..	..	0 19 10	0 5 0	..
Benares .....	80	0 26 0	0 13 3	0 22 6	0 32 0	0 33 0	0 33 0	0 18 0	0 6 9	0 6 14
Secrole .....	80	0 24 0	0 11 0	0 20 0	0 29 0	0 30 0	0 30 0	0 17 0	0 6 4	0 8 4
Mirzapore .....	80	0 27 0	0 15 0	0 23 0	0 30 0	0 32 0	0 34 0	0 19 0	0 6 12	0 9 8
Chunar .....	80	0 25 0	0 13 0	0 21 14	0 32 0	0 33 0	0 32 0	0 18 0	0 6 4	0 9 0
Buxar .....	80	0 24 8	0 12 0	0 17 0	0 32 0	..	0 31 0	..	0 4 12	0 7 0
Goruckpore .....	82	0 29 4	0 16 4	0 24 6	0 39 0	1 0 10	1 2 4	0 21 2	0 7 5	0 8 2
Ghazeepore .....	82	0 25 0	0 12 8	..	0 30 0	0 32 8	0 32 8	0 16 4	0 9 1	0 9 6
Juanpore .....	96	0 17 8	0 9 0	0 14 0	0 21 0	0 22 0	0 24 0	0 14 0	0 4 0	0 6 0
Allahabad .....	107	0 20 0	0 11 0	0 15 0	0 26 0	0 27 0	0 27 0	0 16 0	0 6 0	0 10 0
Sultaunpore .....	80	0 22 8	0 15 2	0 18 4	0 26 2	..	0 28 0	0 17 5	0 5 8	0 20 0
Cawnpore .....	80	0 28 0	0 7 0	0 16 8	0 31 6	0 32 6	1 0 10	0 23 1	0 8 8	0 11 5
Lucknow .....	80	0 20 13	0 10 10	0 17 0	0 25 12	..	0 30 2	0 16 8	0 6 0	0 8 8
Futty Ghur .....	80	0 26 0	0 10 8	0 16 12	0 28 0	0 29 0	0 37 1	0 17 11	0 8 4	0 10 8
Seetapore .....	80	0 24 15	0 9 0	0 18 0	0 30 5	0 34 9	1 0 0	0 20 0	0 5 0	0 8 8
Meerut .....	80	0 32 15	0 10 0	0 12 8	0 30 14	0 32 14	1 8 0	0 24 0	0 10 8	0 14 8
Delhie .....	80	0 30 4	0 6 0	0 16 0	0 31 1	0 32 1	1 2 1	0 21 0	0 10 8	..
Landour .....	80	0 25 0	0 9 0	0 14 0	0 23 0	0 25 0	0 34 0	0 21 0	0 5 8	0 7 8
Barrelly .....	80	0 36 8	0 9 10	..	0 37 15	0 39 6	1 16 4	0 24 0	0 8 7	0 12 0
Moorabad .....	80	..	..	..	0 38 9	0 39 3	..	..	..	..
Shajehanpore .....	106	0 34 1	0 16 4	..	0 38 4	1 0 12	..	..	..	..
Hanse .....	84	0 24 14	0 8 0	0 12 0	0 37 9	0 38 9	0 33 13	0 23 3	0 15 0	0 17 0
Almorah .....	80	0 22 0	0 10 0	0 20 0	0 15 0	..	0 24 0	0 12 0	0 5 8	0 7 0
Lohoo Ghaut .....	80	0 22 1	0 14 8	..	..	..	1 0 0	0 19 1	0 5 8	0 6 12
Agra .....	80	0 30 8	0 9 0	0 11 0	0 31 6	0 32 6	1 1 3	0 24 9	0 9 0	0 9 8
Muttra .....	80	0 32 0	0 8 0	0 13 0	0 35 1	0 36 1	1 4 0	0 27 8	0 10 0	0 10 8
Ally Ghur .....	80	0 36 12	0 8 0	0 22 0	0 33 0	0 33 8	..	0 22 10	0 9 4	0 14 0
Mynpooree .....	80	0 29 4	0 9 0	0 18 5	0 31 13	0 32 4	1 2 0	0 19 8	0 8 3	0 12 0
Etawah .....	80	0 27 15	0 8 0	0 17 0	0 36 4	..	0 38 6	0 23 0	0 8 0	0 11 0
Umballah .....	80	0 26 6	0 7 0	0 10 0	0 27 11	0 28 11	0 32 13	0 18 0	0 11 5	0 14 0
Hissar .....	80	0 24 0	0 10 0	..	0 38 4	..	0 28 8	0 24 0	0 16 0	..
Saugor .....	80	1 0 0	0 10 0	0 18 0	1 0 0	1 2 8	0 28 0	0 17 0	0 10 8	0 11 3
Jubbulpore .....	80	0 36 7 $\frac{1}{2}$	0 12 11	0 19 1	1 4 12 $\frac{1}{2}$	..	..	0 21 0	0 9 4	..
Hoshungabad .....	80	1 1 10	0 10 2	0 18 4	1 4 8	..	0 22 8	0 15 12	0 10 2	0 11 6
Nowgung .....	80	0 29 0	0 12 0	0 16 0	0 33 0	..	1 1 0	0 23 0	0 14 4	..
Bandah .....	80	0 26 0	0 9 0	0 16 0	0 36 15	0 37 7	0 31 0	0 20 0	0 13 0	0 14 0
Nagode .....	80	0 28 3	0 10 14	0 22 8	0 36 0	..	..	0 16 4 $\frac{1}{2}$	0 8 11	..
Nusseerabad .....	84	0 20 8	0 7 0	0 12 0	0 23 12	0 24 12	0 28 5	0 17 8	1 0 0	1 5 0
Neemuch .....	80	0 20 15	0 5 8	0 10 0	0 20 13	0 21 13	0 25 0	0 14 1	0 23 0	0 28 0
Ferozepore .....	80	0 23 0	0 8 0	0 12 0	0 37 1	0 38 0	1 0 10	0 17 1	0 9 0	0 16 0
Loodianah .....	80	0 26 0	0 11 0	0 13 0	0 37 0	0 38 0	0 37 7	0 20 4	0 10 15	0 14 12 $\frac{1}{2}$
Sukkur .....	80	..	..	..	..	..	..	..	..	..
Head-Quarters' Camp ..	80	..	..	..	..	..	..	..	..	..
Gwalior .....	80	0 25 0	0 9 3	0 13 7	0 25 14	..	0 26 1 $\frac{1}{2}$	0 18 15	0 16 8	..
Average .....	..	27 $\frac{1}{2}$	12 $\frac{1}{8}$	22	31	..	..	19 $\frac{3}{4}$	9 $\frac{5}{8}$	..

NOTE.—An Indian maund is 40 seers, each seer 14,400 grains avoirdupois. A maund therefor

several Stations of the Bengal Army for the Month of July, 1845.

Ghee.		Bread Loaves.		Best Grass fed.		Fowls.							Distance from Calcutta in miles.	Remarks.
Cows.	Buffaloes.	1st Sort.	2nd Sort.	Sheep.	Bullocks.	1st Sort.	2nd Sort.	3rd Sort.	Milk.	Oil Mustard.	Sugar Candy.	Flour.		
Pr Rpee.	Pr Rpee.	Pr Rpee.		Each.	Each.	Per Rupee.			Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.		
M. S. C.	M. S. C.	No.	No.	R. A. P.	R. A. P.	No.	No.	No.	M. S. C.	M. S. C.	M. S. C.	M. S. C.		
..	..	28	..	5 2 0	7 10 0	0	0	6	0 13 0	..	0 5 1 $\frac{1}{2}$	0 16 0	..	
..	..	..	..	..	..	..	..	..	..	0 7 0	..	..	248	S.W.
0 2 6	0 2 8	..	..	..	..	..	..	..	0 18 0	0 5 8	0 3 8	0 18 0	350	S.W.
0 3 0	0 2 0	16	18	..	..	8	12	16	0 20 0	0 6 0	0 3 8	0 12 0	187	N.E.
0 2 8	0 1 14	..	..	..	..	..	..	..	0 22 0	0 5 12	0 3 4	0 16 0	342	S.E.
..	0 1 8	..	..	..	..	..	..	..	..	0 4 0	0 3 0	..	400	N.E.
0 2 0	..	..	..	..	..	..	..	..	0 16 0	..	..	0 6 0	290	N.E.
..	..	14	20	..	..	4	6	8	0 25 0	0 6 6	0 3 8	0 14 0	376	N.W.*
0 3 0	0 3 4	14	15	..	..	12	16	18	0 32 0	..	..	0 11 0	239	N.W.
0 2 10	0 2 10	..	..	..	..	..	..	..	0 30 0	0 4 0	0 2 11	0 9 4	236	N.W.
0 2 5	0 2 12	16	..	0 8 0	..	..	..	..	..	0 7 0	0 3 0	0 12 0	428	N.W.
0 1 4	0 2 10	16	18	1 0 0	..	5	6	10	0 16 0	0 7 12	0 3 5 $\frac{1}{2}$	0 14 0	424	N.W.
0 2 10	0 2 14	12	14	0 12 0	8 8 0	8	10	12	0 20 0	0 8 0	0 4 8	0 15 0	455	N.W.
0 2 12	0 2 13	21	32	1 0 0	5 0 0	4	6	8	..	0 6 8	0 3 4	0 13 0	433	N.W.
0 2 14	0 2 14	24	..	0 12 0	..	5	7	12	0 26 0	0 6 8	0 3 12	0 15 8	380	N.W.
0 1 14	0 2 10	8	..	1 0 0	..	5	8	..	0 30 0	0 9 6	0 4 1	0 16 8	525	N.W.
0 2 3	0 2 11 $\frac{1}{2}$	..	..	..	..	4	5	6	0 20 0	0 8 2	0 3 12	0 15 0 $\frac{1}{2}$	431	N.W.
0 2 2	..	16	..	0 8 0	..	8	12	16	0 16 0	0 6 0	0 4 0	0 11 0	470	N.W.
0 1 10	0 1 14	16	18	0 8 0	2 0 0	4	6	8	0 22 0	0 6 0	0 3 4	0 12 0	498	N.W.
..	0 2 2	..	..	..	..	..	..	..	0 20 0	0 8 0	0 4 0	0 14 8	424	N.W.
..	0 2 5	..	..	..	..	3	4	7	0 18 0	0 7 4	0 3 8	0 19 0	628	N.W.
0 1 14	..	18	19	..	..	2	3	4	0 18 0	0 6 11	0 4 4	0 14 5	619	N.W.
..	0 2 2	..	..	..	..	..	..	..	0 20 0	0 6 0	0 2 12	0 15 0	717	N.W.
..	0 2 0	16	..	1 0 0	..	4	6	8	0 30 0	0 5 15	0 3 0	0 14 0	680	N.W.
0 2 10	0 2 12	25	26	1 8 0	..	2	4	5	0 17 12	0 7 1	0 3 0	0 21 8	906	N.W.
0 2 9	0 2 11	..	..	..	..	..	..	..	0 23 0	0 7 1	0 3 8	0 16 0	900	N.W.
0 2 2	0 2 4	..	..	..	..	..	..	..	0 16 0	0 5 0	0 2 12	0 15 0	980	N.W.
0 2 4	..	16	..	..	..	4	6	9	0 30 0	0 7 1	0 3 10	0 19 3	782	N.W.
..	..	..	..	..	..	..	..	..	..	9 6 5	..	..	842	N.W.
..	..	..	..	..	..	..	..	..	..	0 7 5	..	..	735	N.W.
0 2 15	..	8	10	..	..	4	5	6	0 35 0	0 3 0	..	0 12 0	995	N.W.
0 2 4	0 2 8	12	..	..	..	5	8	..	0 20 0	0 3 8	0 2 8	0 11 0	896	N.W.
0 3 1	..	..	..	..	..	..	..	..	..	..	..	..	806	N.W.
0 2 9	0 2 10	22	..	..	..	4	5	6	0 21 0	0 8 0	0 3 11	0 16 12	796	N.W.
..	0 2 9	20	..	..	..	4	5	6	0 21 6	0 7 4	0 4 0	0 16 0	820	N.W.
0 2 13	0 2 15	8	9	..	..	4	5	7	0 24 0	0 9 4	0 2 12	0 25 0	816	N.W.
0 2 7	..	16	..	..	..	4	5	6	0 28 0	0 8 7	0 3 0	0 19 8	686	N.W.
..	0 2 8	16	..	1 8 0	..	4	5	6	0 20 0	0 8 8	0 3 12	0 10 0	719	N.W.
..	0 2 7	19	20	..	..	3	4	5	0 18 0	0 6 7	0 3 0	0 13 13	990	N.W.
0 3 0	..	..	..	..	..	..	..	..	1 0 0	0 7 4	0 3 0	0 15 0	1,015	N.W.
0 3 0	0 3 0	40	..	1 4 0	..	5	6	7	0 20 0	0 7 8	0 3 4	0 22 0	742	W.
..	0 3 3	..	..	..	..	..	..	..	0 32 0	0 5 4 $\frac{1}{2}$	..	0 16 0	700	W.
0 2 12	0 3 4	..	..	1 0 0	..	4	6	8	0 25 0	0 4 6	0 2 6	0 21 6	864	W.
..	0 2 13	14	16	..	..	4	8	12	0 22 0	0 6 10 $\frac{1}{2}$	0 3 0	0 17 0	620	W.
0 2 8	0 2 10	12	12	1 0 0	..	6	7	8	0 20 0	0 6 6	0 3 9	0 14 0	613	W.
0 2 9	..	..	..	..	..	..	..	..	0 19 9	0 4 5 $\frac{1}{2}$	0 2 11 $\frac{1}{2}$	0 16 4	..	W.
..	0 2 12	21	..	1 4 0	..	3	4	5	0 17 0	0 5 0	0 2 0	0 13 0	1,018	N.W.
0 2 2	0 2 4	19	20	..	..	3	4	5	0 18 0	0 4 0	0 2 2	0 13 1	1,049	N.W.
0 2 11	0 2 13	20	..	..	..	2	3	4	0 16 0	0 6 15	0 2 12	0 13 1	1,160	N.W.
0 2 4	0 2 6	..	..	..	..	2	3	4	0 20 0	0 8 0	0 3 0	0 15 15	1,100	N.W.
..	..	..	..	..	..	..	..	..	..	..	..	..	1,400	N.W.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
0 2 5	..	..	..	..	..	4	5	6	0 18 0	0 5 5	0 3 0	0 9 11	782	N.W.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

weighs 82 $\frac{1}{2}$  lbs., a seer 2·057 lbs., each seer of sixteen chetanks of 900 grains each.

W. MACLEAN, Secretary.



TABLE VIII.—Price Current of Grain, Provisions, &amp;c., at the

Stations.	Sicca weight per Seer.	Rice.				Boot Gram.								Salt.			
		Wheat.	1st Sort.		3rd Sort.		1st Sort.		2nd Sort.		Barley.	Dhall.		1st Sort.			
			Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.		Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.		
		M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.
Presidency .....	80	..	0 10 0	0 35 8	0 29 1½	0 32 0	..	..	..	..	..	..	..	0 2 13	..	..	..
Cuttack .....	80	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Berhampore .....	80	0 31 0	0 25 0	0 29 0	0 43 8	0 29 0	0 44 8	0 35 0	0 7 0	..	..	..	..	..	..	..	..
Dacca .....	80½	0 26 8	0 37 8	0 40 0	0 28 8	0 26 12	..	..	..	..	..	..	..	0 8 0	..	..	..
Chittagong .....	80	..	0 30 0	0 41 0	..	..	..	..	..	..	..	..	..	..	..	..	..
Assam .....	80	..	..	0 40 0	..	..	..	..	..	..	..	..	..	0 6 0	..	..	..
Chirrapoonjie .....	80	..	0 30 0	0 45 0	0 13 4	0 14 0	..	..	..	..	..	..	..	0 7 0	..	..	..
Dinapore .....	80	0 32 10½	0 13 0	0 23 5	0 28 0	0 43 9	0 48 3½	..	..	..	..	..	..	0 4 0	..	..	..
Dorundah .....	80	0 26 0	0 18 0	..	0 20 0	..	..	..	..	..	..	0 18 0	..	0 6 0	..	..	..
Benares .....	80	0 25 8	0 13 0	0 21 0	0 29 8	0 30 8	0 33 0	0 20 0	0 5 8	..	..	..	..	..	..	..	..
Secrole .....	80	0 21 5½	0 19 2½	0 22 5	0 27 12	0 29 5	0 30 0	0 20 13½	0 7 6	..	..	..	..	..	..	..	..
Mirzapore .....	80	0 26 0	0 15 0	0 22 0	0 30 0	0 31 0	0 33 0	0 22 0	0 6 12	..	..	..	..	..	..	..	..
Chunar .....	80	0 24 0	0 13 0	0 20 2	0 24 0	0 25 0	0 31 0	0 27 0	0 5 8	..	..	..	..	..	..	..	..
Buxar .....	80	0 25 0	0 12 0	0 16 0	0 31 0	0 36 0	0 35 0	..	0 4 12	..	..	..	..	..	..	..	..
Ghazeepore .....	82	0 23 12	0 12 8	..	0 30 0	0 31 4	0 35 0	0 20 0	0 7 10½	..	..	..	..	..	..	..	..
Goruckpore .....	82	0 32 8	0 14 10	0 26 0	0 34 0	0 35 12	0 47 2	0 30 0	0 6 8	..	..	..	..	..	..	..	..
Juanpore .....	96	0 19 0	0 9 0	0 13 0	0 19 0	0 20 0	0 26 0	0 17 0	0 4 8	..	..	..	..	..	..	..	..
Allahabad .....	106	0 21 8	0 12 0	0 19 0	0 30 0	0 30 4	0 30 0	0 18 0	0 5 12	..	..	..	..	..	..	..	..
Sultaunpore .....	80	0 28 2	0 15 0	0 17 13	0 31 4	..	0 31 1	0 23 8	0 5 8	..	..	..	..	..	..	..	..
Cawnpore .....	80	0 26 4	0 7 0	0 16 0	0 34 0	0 35 13	0 35 11	0 24 7	0 7 8	..	..	..	..	..	..	..	..
Lucknow .....	80	0 22 9	0 8 8	0 17 0	0 23 12	0 24 0	0 29 10	0 18 12	0 5 8	..	..	..	..	..	..	..	..
Futty Ghur .....	80	0 28 11	0 10 4	0 12 0	0 33 7	0 34 9	0 38 7	0 21 0	0 7 13	..	..	..	..	..	..	..	..
Seetapore .....	80	0 25 11	0 9 0	0 19 9	0 29 9	0 31 4	0 36 15	0 18 11	0 5 0	..	..	..	..	..	..	..	..
Meerut .....	80	0 28 6	0 8 8	0 12 0	0 29 0	0 30 8	0 36 6	0 24 8	0 9 15	..	..	..	..	..	..	..	..
Delhie .....	80	0 28 0	0 7 0	0 13 0	0 31 5	0 32 2	0 37 12	..	0 10 8	..	..	..	..	..	..	..	..
Landour .....	80	0 18 0	0 8 8	0 13 0	0 16 8	0 18 0	0 22 0	0 18 0	0 4 8	..	..	..	..	..	..	..	..
Bareilly .....	80	0 28 8	0 9 10	0 13 3	0 29 4	0 30 4	0 38 15	0 22 13	0 7 9	..	..	..	..	..	..	..	..
Mooradabad .....	80	..	..	..	0 29 5	0 30 0	..	..	..	..	..	..	..	..	..	..	..
Shajehanpore .....	106	0 35 0	..	..	0 34 9	0 36 0	..	..	..	..	..	..	..	..	..	..	..
Hanse .....	84	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Almorah .....	80	0 21 0	0 11 0	0 19 0	0 16 0	..	0 24 0	0 13 0	0 6 0	..	..	..	..	..	..	..	..
Lohoo Ghaut .....	80	0 22 0	0 13 8	..	..	..	0 30 0	0 17 0	0 5 8	..	..	..	..	..	..	..	..
Agra .....	80	0 28 12	0 9 0	0 11 0	0 34 13	0 35 13	0 39 11	0 29 12	0 9 1	..	..	..	..	..	..	..	..
Muttra .....	80	0 31 9	0 8 0	0 12 0	0 38 7	0 41 0½	0 44 0	0 28 4	0 10 0	..	..	..	..	..	..	..	..
Ally Ghur .....	80	0 33 8	0 7 0	0 15 2	0 34 0	0 34 8	0 42 0	0 27 0	0 9 4	..	..	..	..	..	..	..	..
Mymporee .....	80	0 30 0½	0 11 8	0 16 11	0 31 11	0 37 6	0 42 12	0 21 6	0 7 0	..	..	..	..	..	..	..	..
Etawah .....	80	0 26 9	0 8 0	0 13 15	0 35 4	0 39 0	0 39 0	0 23 0	0 7 4	..	..	..	..	..	..	..	..
Gwalior .....	80	0 20 0	0 9 11	0 14 8	0 29 9	..	0 27 2	0 17 0	0 15 15	..	..	..	..	..	..	..	..
Umballah .....	80	0 22 10	0 7 0	0 10 0	0 25 5	0 26 6	0 26 6	0 17 11	0 12 6	..	..	..	..	..	..	..	..
Hissar .....	80	0 22 11	0 10 0	..	0 31 8	..	0 28 0	0 18 0	0 14 0	..	..	..	..	..	..	..	..
Saugor .....	80	0 27 6	0 10 0	0 14 0	0 26 0	0 27 0	0 28 4	0 16 0	0 10 8	..	..	..	..	..	..	..	..
Hoshungabad .....	80	0 23 0	..	0 16 8	0 26 0	..	0 19 0	0 14 0	0 11 0	..	..	..	..	..	..	..	..
Nowgung .....	80	0 22 4	0 15 2	0 17 0	0 31 3	..	0 31 0	0 21 13	0 14 0	..	..	..	..	..	..	..	..
Nagode .....	80	0 22 9½	0 10 14	0 20 11½	0 27 6	0 23 6½	..	0 15 13	0 10 15	..	..	..	..	..	..	..	..
Jubbulpore .....	80	0 29 4	0 11 0	0 14 0	0 33 0	..	..	0 18 12	0 9 0	..	..	..	..	..	..	..	..
Mhow .....	80	0 16 11	0 7 0	0 9 0	0 15 15	0 16 10	0 18 0	0 13 0	0 25 0	..	..	..	..	..	..	..	..
Nusseerabad .....	84	0 19 8	0 7 0	0 10 0	0 22 10	0 23 10	0 28 0	0 14 0	0 40 0	..	..	..	..	..	..	..	..
Neemuch .....	80	0 13 13	0 5 0	0 8 0	0 16 11	0 17 11	0 19 0	0 13 0	0 25 0	..	..	..	..	..	..	..	..
Loodianah .....	80	0 20 0	0 9 9	0 13 9	0 27 5	0 28 5	0 26 5	0 20 0	0 14 0	..	..	..	..	..	..	..	..
Ferozepore .....	80	0 19 4	0 10 0	0 14 0	0 30 6	0 31 6	0 28 0	0 15 13	0 12 15	..	..	..	..	..	..	..	..
Jullunder .....	84	0 19 0	0 10 15	0 14 2	0 26 8	..	..	0 17 15	0 16 0	..	..	..	..	..	..	..	..
Kurtarpore .....	80	0 21 11	0 10 15	0 15 0	0 22 6	..	0 28 2	0 15 15	0 16 6	..	..	..	..	..	..	..	..
Nokodur .....	80	0 19 5	0 10 0	0 12 4	0 23 12	0 25 3	0 15 13	0 15 13	0 14 0	..	..	..	..	..	..	..	..
Hooshearpore .....	80	0 21 8	0 11 0	0 14 0	0 21 10	..	0 25 2	0 16 0	0 14 0	..	..	..	..	..	..	..	..
Kote Kangra .....	80	0 20 0	0 15 8	0 19 0	..	..	0 22 0	0 16 0	0 12 0	..	..	..	..	..	..	..	..
Noorpore .....	80	0 21 0	0 13 0	0 18 0	0 13 0	..	0 30 0	0 16 0	0 18 0	..	..	..	..	..	..	..	..

Several Stations of the Bengal Army for the Month of May, 1846.

Salt.			Ghee.		Bread Loaves.		Best Grass fed.		Fowls.			Milk.	Oil Musturd.	Sugar (Cheenee).	Flour.
2nd Sort.			Cows.	Buffaloes.	1st Sort.	2nd Sort.	Sheep.	Bullocks.	1st Sort.	2nd Sort.	3rd Sort.				
Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.	Each.	Each.	Per Rupee.			Pr Rpee.	Pr Rpee.	Pr Rpee.	Pr Rpee.
M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	No. No.	No. No.	R. A. P.	R. A. P.	No. No. No.	No. No. No.	No. No. No.	M. S. C.	M. S. C.	M. S. C.	M. S. C.
0 8 5	0 24 0	0 8 8	0 8 8	0 6 0	0 8 0	0 7 0	5 2 0	7 10 0	0 3 8	0 8 12	0 9 16	0 13 0	0 6 0	0 5 13	0 16 0
0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 26 0	0 5 8	0 3 10	0 16 0
0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 20 0	0 4 8	0 3 0	0 14 0
0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 20 0	0 4 0	0 3 0	0 20 0
0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 16 0	0 4 0	0 3 0	0 7 0
0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 7 0	0 25 0	0 6 10	0 3 8	0 14 0
0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 5 12	0 25 0	0 4 0	0 3 0	0 8 0
0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 7 10	0 18 0	0 6 4	0 3 10	0 12 7
0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 9 4	0 16 0	0 6 0	0 3 10	0 12 5
0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 24 0	0 7 0	0 5 0	0 11 0
0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 7 4	0 22 0	0 5 8	0 4 0	0 14 0
0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 7 13	0 20 0	0 6 9	0 4 1	0 13 14
0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 16 0	0 6 13	0 4 1	0 16 0
0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 8 8	0 22 0	0 6 8	0 3 8	0 12 0
0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 20 0	0 7 8	0 4 0	0 18 8
0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 18 0	0 7 0	0 3 8	0 18 8
0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 17 0	0 5 0	0 4 4	0 15 8
0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 20 0	0 7 8	0 3 0	0 16 0
0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 30 0	0 4 10	0 3 8	0 14 0
0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 18 10	0 7 7	0 4 0	0 19 0
0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 10 12	0 26 0	0 6 0	0 2 12	0 15 8
0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 16 0	0 4 4	0 3 0	0 12 8
0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 10 13	0 24 0	0 6 2	0 4 3	0 16 13
0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 8 0	0 6 0	0 6 7	0 4 3	0 16 13
0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 6 8	0 20 0	0 31 2	0 2 4	0 11 0
0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 21 0	0 7 15	0 3 12	0 17 0
0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 12 13	0 30 0	0 8 0	0 4 0	0 16 0
0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 11 0	0 22 4	0 8 4	0 3 5	0 22 12
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 27 8	0 8 0	0 3 0	0 16 0
0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 20 0	0 7 12	0 3 12	0 10 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 16 0	0 4 12	0 2 3	0 12 6
0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 11 8	0 17 0	0 5 3	0 2 12	0 13 10
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 20 0	0 5 14	0 3 4	0 15 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 22 0	0 3 0	0 2 14	0 17 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 25 0	0 5 9	0 3 0	0 13 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 17 6	0 4 5	0 2 11	0 13 6
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 16 0	0 4 12	0 2 12	0 16 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 18 0	0 7 6	0 2 4	0 10 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 18 0	0 5 0	0 2 10	0 14 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 18 0	0 4 0	0 2 2	0 9 6
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 18 0	0 6 5	0 2 12	0 13 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 14 0	0 5 13	0 2 12	0 12 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 16 0	0 7 5	0 2 2	0 11 0
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 15 0	0 6 5	0 3 4	0 10 9
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 14 0	0 4 0	0 2 8	0 9 15
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 20 0	0 7 0	0 3 0	0 12 10
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 18 0	0 4 0	0 2 8	0 8 4
0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 13 8	0 30 0	0 6 8	0 3 4	0 8 0



TABLE IX.

Contract Prices of Supplies to the Military College at Addiscombe from 1836 to 1847.

	1836.		1837.		1838.		1839.		1840.		1841.		1842.		1843.		1844.		1845.		1846.		1847.		
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	
Beef and Mutton, per lb.	0	7½	0	7½	0	7	0	7¾	0	7¾	0	7¾	0	8¾	0	67⁄8	0	6¾	0	6½	0	0	7¼	0	7¾
Flour, best seconds, per sack of 280 lbs. ....	30	0	46	0	46	0	61	0	54	0	46	0	52	0	37	0	41	0	35	0	48	0	57	0	
Lump Sugar, per cwt....	82	0	82	0	80	0	79	6	85	0	103	6	82	6	78	0	78	0	77	0	65	0	66	0	
Moist ditto, " ....	66	0	60	0	64	0	61	9	65	0	80	9	66	0	60	0	62	0	58	0	50	0	49	6	
East India Rice, " ....	15	6	22	0	16	9	23	6	24	3	24	3	20	0	19	0	19	0	17	6	22	0	24	6	
Valentia Raisins, " ....	49	0	46	0	41	6	41	6	47	0	42	0	38	0	38	0	42	0	52	0	42	0	45	0	
Currants " ....	68	0	80	0	62	0	74	0	84	0	78	6	68	0	60	0	56	0	52	0	56	0	56	6	
Congou Tea, per lb. ....	4	0	4	0	3	11	3	8½	5	5	4	4½	4	2	3	11	3	6	3	4¼	3	2	3	4½	
Malt, per qr. ....	62	0	64	0	59	0	68	0	70	0	63	0	60	0	59	0	63	0	64	0	62	0	88	0	
Hops, per cwt. ....	98	0	92	0	78	0	72	0	66	0	196	0	130	0	94	0	145	0	168	0	155	0	95	0	
Mould Candles, per doz.	6	1	6	1	6	3	7	3	6	9	6	9	6	11	6	7	6	0	5	5	5	6	6	5	
Dip " ....	5	3	5	4	5	7	6	6	5	11	5	10½	5	10	5	8	5	3	4	10	4	11	5	10	
Sperm Oil, per gallon....	6	0	6	6	6	10	7	3	8	11	8	9	7	0	6	4½	6	0	6	9	6	6	7	0	
Yellow Soap, per cwt....	46	0	46	6	46	6	50	6	46	9	46	9	46	0	45	0	44	0	40	0	40	6	45	9	

TABLE X.

EXPORTS OF SALT.						IMPORTS OF SALT.					
Years.	From.	To.	Quantity.	Value.	Cost per Cwt.	Intro.	From.	Quantity.	Value.	Cost per Cwt.	Years.
1845-46	Bombay .....	Calcutta ....	Cwts. 254,364	Rupees. 40,312	s. d. 0 3·8	Calcutta ....	All Parts ...	Cwts. 713,128	Rupees. 40,42,642	s. d. *11 4·05	1844-45
1844-45	Ditto .....	Ditto ....	331,778	66,111	0 4·78	Malabar ....	Bombay ...	323,317	1,15,641	0 8·58	1844-45
1845-46	Ditto .....	{ All Parts, in- cluding Cal- cutta.... }	390,148	87,750	0 5·39	Canara ...	Bombay ...	31,027	8,222	0 6·36	1844-45
1844-45	Ditto .....	Ditto ....	410,264	83,235	0 4·87						
1844-45	{ Madras (Nel- lore)..... }	Calcutta ....	234,767	94,667	0 9·68						
1844-45	{ Madras Presi- dency .....	All Parts by Sea	260,013	99,223	0 9·16						
1844-45	{ Masulipatam, Rajamundry, Guntoor, Ca- nara .....	{ By Land to Mysore and the Nizam's Territories ... }	460,537	6,49,894	*2 9·87						
TOTAL IMPORTS BY SEA INTO CALCUTTA DURING THE YEAR 1844-45.											
	From.	Coast of Malabar.	Ceylon.	Arabian and Persian Gulf.	England.	France.	Mauritius.	Manila.	Total.		
Quantity in Cwts. ....		381,404	25,124	296,249	582	6,233	934	2,602	713,128		
Value in Rupees .....		21,52,020	1,42,915	16,90,231	3,216	34,118	5,088	15,054	40,42,642		

\* Duty inclusive.



*Copy of an Invoice given to J. Chapman, Esq., July, 1846, by Mr. Smith, of the firm of Nicol and Co., Bombay. The transaction took place in July, 1845.*

	R.	A.	P.
5 rash or 200 tons of salt = 5600 maunds, at } 150 rupees per rash.....	750	0	0
Duty 12 annas per maund.....	4200	0	0
Carriage hire from Tannah to Bombay.....	15	2	0
Freight to Calcutta, 350 rupees per rash .....	1750	0	0
	6715	2	0

The cost of this salt, including carriage, but exclusive of Excise duty, to the purchaser's door, was a decimal more than  $4\frac{1}{2}d.$  per cwt., and *inclusive* of the Excise duty of 12 annas per maund, the price for shipment to Calcutta was 2s.  $5\frac{3}{4}d.$  per cwt., or 49s. 8d. per ton.

*The Influence of Education, shown by facts recorded in the Criminal Tables for 1845 and 1846.* By G. R. PORTER, Esq., F.R.S.

[Read before the Statistical Section of the British Association at Oxford, 24th June, 1847.]

It would be contrary to the rules laid down for the guidance of this Section of the Association to enter upon the region of opinion and to discuss the merits of many among the various questions connected with social economy that from time to time are found to agitate the community. But it falls strictly within those rules to bring forward facts upon which, and upon which alone, those questions can safely be determined. The motto "*Aliis Exterendum*," assumed by the Statistical Society of London, sufficiently marks our purpose and defines our limits, and seems to call upon us to furnish our garner with sheaves of facts, whence others may thresh out the grain that must nourish and sustain the moral frame of society.

It appears to me that the attention of the Section can, at this time especially, be well bestowed upon the examination of facts that have a direct and important bearing upon the very grave question that has of late excited the minds of all thinking persons in the community, the question of the effect that may be expected to be produced upon our records of criminality by effectually carrying out the means required for providing a sound moral education for the mass of the community.

On a former occasion, and almost at the commencement of its existence, I was led to offer to the Statistical Society of London the result of an examination into certain facts then recently brought forward by M. Guerry, in his "*Essay on the Moral Statistics of France*," and showed, from an extension of those facts over a wider field in point of time than that which M. Guerry had embraced, that the theory which they were supposed to establish had no existence in truth, but that it was at variance with the conclusion which alone could be correctly drawn from the premises. It must be at all times dangerous to base any theory upon a solitary case, a remark especially true with regard to questions of morals, which are peculiarly liable to be influenced by disturbing causes. This should make us anxious on all occasions to multiply our store of instances

as the safest means of avoiding error, and almost the only way of approaching to the point of certainty.

Since the time to which I have here alluded, and probably in consequence of the discussions that then arose upon the subject, the criminal statistics of this country have been made to impart a greater amount of information than they had previously given, and especially with reference to the degree of instruction that has been imparted to persons brought before the bar of justice. I have elsewhere brought forward the result exhibited by that classification in the six years ending with 1841, and shall not now revert, with any degree of minuteness, to the experience of those years. It may be well, however, to show the number of educated persons charged with offences in England and Wales during those years, and to give the proportions which they bore to the whole numbers accused, continuing the table to the end of 1846, and thus embracing a period of eleven years.

	Total number charged with Offences.		Total.	Number of Per- sons superiorly Instructed.		Total.	Centesimal Pro- portions which the Educated bore to the whole Number accused.
	Males.	Females.		Males.	Females		
1836....	17,248	3,736	20,984	176	15	191	0·91
1837....	19,407	4,205	23,612	98	3	101	0·43
1838....	18,905	4,189	23,094	74	5	79	0·34
1839....	19,831	4,612	24,443	74	4	78	0·32
1840....	21,975	5,212	27,187	100	1	101	0·37
1841....	22,560	5,200	27,760	126	....	126	0·45
1842....	25,740	5,569	31,309	65	4	69	0·22
1843....	24,251	5,340	29,591	134	6	140	0·47
1844....	21,549	4,993	26,542	109	2	111	0·42
1845....	19,341	4,962	24,303	86	3	89	0·37
1846....	19,850	5,257	25,107	83	2	85	0·34
Average....	20,969	4,843	25,812	102	4	106	0·41

I have given, in an appendix, a statement of the number of persons instructed beyond reading and writing who were *accused* of offences in the several counties of England and Wales, during each of the eleven years, from which it will be seen that of the fifty-two counties there were only

- 7 which furnished cases of that description in each one of the years
- 3 which furnished such cases in 10 of the 11 years.
- 2                   "                   9                   "
- 3                   "                   8                   "
- 5                   "                   7                   "
- 6                   "                   6                   "
- 2                   "                   5                   "
- 5                   "                   4                   "
- 3                   "                   3                   "
- 4                   "                   2                   "
- 5                   "                   1                   "
- 7 which, during the whole period, furnished no cause of accusation against  
educated persons.

From this statement we find that on the average more than one-half of the counties have in each year failed to furnish any such accusation.



It thus appears that while among the male population generally, one person in every 370 was, on an average, yearly charged with an offence, and that while among the females that average was one in 1680, taking the population of 1841; there were of persons educated beyond reading and writing no more than one accused in 76,227 of the male, and one in 2,034,133 of the female population.

I now proceed to a more particular examination of the returns in this respect for the years 1845 and 1846, and am enabled to do this satisfactorily through the kindness of my friend Mr. Redgrave, to whom the public is greatly indebted for his enlightened labours in this most interesting branch of inquiry.

It has been seen that out of 24,303 persons (19,341 males and 4,962 females,) accused of crimes in 1845, there were no more than 89, viz. 86 males and 3 females, to whom instruction beyond its merest elements had been imparted, and that in 1846 the number of such persons was no greater than 85, of whom two were females, out of 25,107 accused (19,850 males and 5,257 females). In 1845 the number of persons so instructed who were *convicted* was only 45, one of these being a female. They were tried and convicted in the following counties:—

	Persons.		Persons.
Bucks .....	2	Northumberland .....	2
Cambridge .....	1	Southampton .....	2
Chester .....	2	Stafford .....	2
Cornwall .....	1	Suffolk .....	1
Devon .....	2	Surrey .....	1
Dorset .....	2	Sussex .....	1
Essex .....	2	Warwick .....	4
Gloucester with Bristol .....	3	Wilts .....	2
Kent .....	1	Worcester .....	1
Lancaster .....	6	York .....	3 (1 female.)
Middlesex .....	3	Anglesea .....	1

The proportion of these convicts to the population of the several counties, as enumerated, in 1841 was—

Bucks .....	1 in 77,991	Northumberland .....	1 in 125,139
Cambridge .....	„ 164,459	Southampton .....	„ 177,502
Chester .....	„ 197,830	Stafford .....	„ 255,252
Cornwall .....	„ 341,279	Suffolk .....	„ 315,073
Devon .....	„ 266,730	Surrey .....	„ 582,678
Dorset .....	„ 87,521	Sussex .....	„ 299,753
Essex .....	„ 172,490	Warwick .....	„ 100,429
Gloucester with Bristol...	„ 143,796	Wilts .....	„ 65,246
Kent .....	„ 548,337	Worcester .....	„ 233,336
Lancaster .....	„ 277,842	York .....	„ 530,493
Middlesex .....	„ 525,545	Anglesea .....	„ 50,891

It thus appears that in the year 1845, twenty-two counties of England and Wales, comprising a population of 11,183,718 persons, furnished 45 convicts who had received instruction more than reading and writing, while the remaining thirty counties, containing 4,728,039 inhabitants, did not furnish one case where that amount of advantage had been imparted. Further, of the 8,136,533 females living in England and Wales, only unto one of those who were adjudged to have outraged the laws of her country, had the page of knowledge been opened.

In 1846, although the number of educated persons accused was fewer than in 1845 by 4, the number of convictions among them was greater by 3 persons, it having amounted to 48. These were furnished by

Persons.		Persons.	
Cambridge .....	1	Northampton .....	2
Chester .....	3	Northumberland .....	1
Devon .....	2	Somerset .....	1 (a female.)
Essex .....	2	Southampton .....	4
Gloucester with Bristol .....	2	Stafford .....	6
Hertford .....	2	Suffolk .....	1
Kent .....	1	Warwick .....	5
Lancaster .....	7	Wilts .....	1
Lincoln .....	1	Worcester .....	2
Middlesex .....	1	York .....	3

The proportions of these to the populations of the counties, were:—

Cambridge.....	1 in	164,459	Northampton .....	1 in	99,614
Chester .....	„	131,886	Northumberland .....	„	250,278
Devon .....	„	266,730	Somerset .....	„	435,982
Essex .....	„	172,490	Southampton .....	„	88,751
Gloucester with Bristol .....	„	215,691	Stafford .....	„	85,084
Hertford .....	„	78,603	Suffolk .....	„	315,073
Kent .....	„	548,337	Warwick .....	„	80,343
Lancaster .....	„	238,150	Wilts .....	„	130,492
Lincoln .....	„	362,602	Worcester .....	„	116,668
Middlesex .....	„	1,576,636	York .....	„	530,493

The 48 educated criminals convicted in 1846 were furnished by twenty English counties, leaving an equal number of English counties, as well as all the twelve counties in the Principality, altogether free from crime on the part of educated persons. The twenty English counties in which the 48 were convicted contained, in 1841, a population of 10,733,110, while the remaining twenty English counties and Wales contained 5,178,647 inhabitants. In 1846, equally with 1845, out of the whole female population of 8,136,533 with their increase since 1841, only one that had been educated was adjudged deserving of punishment by the laws of her country.

There were fifteen English counties, viz:—

Bedford	Hereford	Nottingham
Berks	Huntingdon	Oxford
Cumberland	Leicester	Rutland
Derby	Monmouth	Salop
Durham	Norfolk	Westmoreland

in which no educated person was convicted in either 1845 or 1846. Four other English counties, viz:—

Hertford, Lincoln, Northampton, and Somerset,

were equally exempt in 1845, and five others, viz:—

Bucks, Cornwall, Dorset, Surrey, and Sussex,

furnished no educated convict in 1846. The single county where, in 1845, an educated female was convicted, was York. The case was that of a person aged 21, guilty of petty larceny, who was sentenced to imprisonment for one month. The solitary female case in 1846 occurred in Somerset. It was that of a person aged 36 convicted of fraud, who was imprisoned for seven months.



The following table shows the nature of the crimes committed by 93 educated persons in the two years 1845 and 1846, and the ages of the parties convicted. It will be seen that there *was not one* among them below the age of 15, although in 1845 the number of charges against uneducated persons of that age was 1,549, while in 1846 it was 1,640. At the next period of life, *i.e.*, between 15 and 20, the number of uneducated persons accused was 5,850 in 1845 and 6,136 in 1846, while the number of educated persons *accused* between these ages was, in 1845, 12, and in 1846 only 2, of whom 4 only were convicted in 1845 and the 2 in 1846.

## 1845.

	Under 15.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 40.	40 and under 50.	50 and under 60.	60 and upwards.	Total.
Murder .....	...	...	...	...	1	...	...	2	3
Manslaughter .....	...	...	...	1	...	...	...	...	1
Assault (common) .....	...	...	2	1	1	...	1	2	7
Burglary and House-breaking, and Curtilage-breaking .....	...	...	1	...	...	...	1	...	2
Unnatural Misdemeanour .....	...	...	...	...	...	1	...	...	1
Larceny .....	...	4	7	3	2	2	...	...	18
Embezzlement .....	...	...	2	2	...	...	1	...	5
Fraud .....	...	...	...	...	1	...	...	...	1
Forgery and Uttering } Forged Instruments ....	...	...	1	...	...	1	2	...	4
Conspiring to Defraud .....	...	...	...	1	...	...	...	...	1
Disturbing a Religious } Congregation .....	...	...	...	...	...	1	...	...	1
Libel .....	...	...	...	...	...	1	...	...	1
Total .....	...	4	13	8	5	6	5	4	45

## 1846.

	Under 15.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 40.	40 and under 50.	50 and under 60.	60 and upwards.	Total.
Manslaughter .....	...	...	1	...	...	...	...	...	1
Assault, (common) .....	...	...	...	...	3	3	...	...	6
Burglary .....	...	...	1	...	...	...	...	...	1
Bigamy .....	...	...	1	...	1	...	...	...	2
Shop-breaking .....	...	...	1	...	...	...	...	...	1
Larceny .....	...	...	3	3	6	1	1	...	14
Embezzlement .....	...	...	2	1	...	...	...	...	3
Receiving Stolen Goods ....	...	...	...	1	1	...	...	...	2
Stealing Money Letters ....	...	1	...	...	...	...	...	...	1
Fraud .....	...	1	1	2	1	...	...	...	5
Riot .....	...	...	...	...	...	1	...	...	1
Forgery and Uttering } Forged Instruments ....	...	...	2	3	3	1	...	...	9
Uttering Counterfeit Coin .....	...	...	...	...	1	...	...	...	1
Libel .....	...	...	...	1	...	...	...	...	1
Total .....	...	2	12	11	16	6	1	...	48

The almost absence of cases of educated females from among our criminal population appears the more striking from the circumstance that the proportion of commitments among females generally in England and Wales has been of late increasing. The numbers of females committed during each of the seven years ending with 1846, is given by Mr. Redgrave, together with the proportion which they bore to the commitments among the males, as follows:—

		Females.	
1840.....	Committed	5,212, or 23·7	to 100 males
1841.....	„	5,200 „	23·0 „
1842.....	„	5,569 „	21·6 „
1843.....	„	5,340 „	22·0 „
1844.....	„	4,993 „	33·1 „
1845.....	„	4,962 „	25·6 „
1846.....	„	5,257 „	26·5 „

The proportions vary, of course, in different counties, but there is no single county of either England or Wales, which fails in any year, and in some degree, to contribute from among its female population to the records of crime. We have seen, however, that in each of the two years 1845 and 1846 only one county in both England and Wales so contributed from among its educated females. The number of such who were accused in each of the above seven years was—

1840 .....	1 .....	or 1 in 5,212	of the whole number of females		
1841 .....	not one				
1842 .....	4 .....	or 1 in 1,392		„	„
1843 .....	6 .....	„	890	„	„
1844 .....	2 .....	„	2,996	„	„
1845 .....	3 .....	„	1,654	„	„
1846 .....	2 .....	„	2,628	„	„

so that, during seven years, the proportion of educated females to the whole number of that sex who were accused of offences has been as 1 to 2029, while their average yearly proportion to the whole female population has been no more than 1 in 3,162,453.

A table is given in the Appendix which shows that during the eleven years from 1836 to 1846 in which the Criminal Returns have been made to indicate the intellectual condition of persons accused of offences, there have been twenty counties in England and eleven of the Welsh counties in which not one educated female has been called before a criminal tribunal. In the twenty English counties and one Welsh county for which this immunity cannot be claimed, there were eleven (ten English and the one Welsh county), in each of which only one offence was charged against any educated female during the whole period; three counties in each of which only 2 such females were accused in all that time; four counties in each of which three such charges were brought during the eleven years; two counties in each of which offences were charged against 4 educated females; and one county, York, where, in the period stated, 8 such females were accused.

In the thirty-one counties of England and Wales thus honourably exempted during the whole period for which we have any records of the kind, there were, in 1841, 2,617,653 females. The remaining counties then contained 5,518,880 females, and we therefore find



that the yearly proportion of *accusations* against educated females to the whole female population of the counties in which they were made, has been only 1 in 1,349,059.

On the average, only one in seventeen of the fifty-two counties of England and Wales has furnished yearly, during eleven years, any criminal charge against an educated female.

It would be quite out of place to enter here upon any inquiry concerning the proportionate tendency to crime in the two sexes. It cannot be pretended that this proportion is correctly indicated by the figures here brought forward, that, in other words, the tendency is twenty-five-fold in educated males more than it amounts to in educated females. The fact is palpable, that females, and especially those of them who, having received a good education, may be supposed to belong in great part to the easy classes, are not assailed by the same temptations to evil-doing which try the characters of men and of the less fortunate among women. For the most part, educated females are either of independent means of living or are supported by their natural guardians, or being married are maintained by the exertions of husbands, advantages which are shared in some, but that a far inferior degree by a great proportion of the female population. If, happily, the general intelligence of the people should be secured by means of education, one thing that would assuredly result from the change would be, the lessening of the number of females who are thrown upon their own resources, and who must in some way provide for their daily wants. Few men, who, by their intelligence, should be enabled to provide for the wants of their sisters and daughters, would leave them to buffet with the world; still fewer would allow their wives to apply themselves to any labours save those of their own household, upon the due performance of which so much of human happiness depends.

The table already given, in which the ages of educated convicts are shown, specifies also the crimes of which they were convicted. These have been few in number, and, with some exceptions, not very heinous in their nature.

In 1845 there were 3 for Murder—the whole number convicted of that crime being 19, of whom 12 were executed and 7 pardoned

„	1 for Manslaughter—the whole number convicted thereof being 80	
„	7 „ Assaults	604
„	2 „ Burglary and House-breaking	733
„	1 „ An Unnatural Misdemeanour	22
„	18 „ Larceny	12,794
„	5 „ Embezzlement	254
„	2 „ Fraud and Conspiring to Defraud	349
„	4 „ Forgery and Uttering Forged Instruments	83
„	1 „ Disturbing a Religious Congregation	} Included with Misdemeanours generally.
„	1 „ Libel	

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45

In 1846 there were 1 for Manslaughter out of a number amounting to .....	72
„ 6 „ Assaults	871
„ 2 „ Bigamy	66
„ 1 „ Burglary	180

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Carried over .... 10

Brought forward 10

In 1846 there were 1 for Shop-breaking out of a number amounting to.....	44
„ 14 „ Larceny „ „	13,331
„ 3 „ Embezzlement „ „	281
„ 2 „ Receiving Stolen Goods „ „	271
„ 1 „ Stealing Money Letter „ „	15
„ 5 „ Fraud „ „	374
„ 1 „ Riot „ „	153
„ 9 „ Forgery and Uttering Forged Instruments „ „	91
„ 1 „ Uttering Counterfeit Coin, &c. „ „	239
„ 1 „ Libel. (Included with Misdemeanours generally.)	

48

The punishments to which educated convicts were sentenced in each of the two years were:—

	1845.	1846.
Death.....	3	....
Transportation for life .....	3	....
„ 15 years .....	....	2
„ 14 „ .....	....	2
„ 10 „ .....	1	3
„ 7 „ .....	4	8
Imprisonment for 2 „ .....	3	2
„ 18 months .....	....	1
„ 1 year .....	6	5
„ 9 months .....	....	2
„ 7 „ .....	....	1
„ 6 „ .....	6	8
„ 5 „ .....	1	....
„ 4 „ .....	2	3
„ 3 „ .....	2	3
„ 2 „ .....	3	2
„ 6 weeks .....	1	....
„ 1 month .....	5	1
„ 14 days .....	1	1
Fined..... £20 .....	1	....
„ 10 .....	....	2
„ 7 .....	....	1
„ 3 .....	....	1
„ One Shilling.....	1	....
Judgment arrested and prisoner discharged	1	....
Discharged on Sureties.....	1	....
	45	48

The small number of persons to whom the blessing of education has been imparted, who are thus found to place themselves in positions to call down upon them any degree of punishment under the laws of their country, is calculated to inspire a doubt whether some considerable errors may not be committed on the part of those functionaries by whom the returns are made. I am assured, however, that every possible care is taken to prevent such errors, that statements are frequently and, whenever any doubts arise, are always sent back to the prisons for verification, but that they are never found erroneous, except in having sometimes included with the persons better instructed



some prisoners who read and write well, without having acquired any other branch of knowledge. In most cases the returns in this respect are examined by the Chaplains of prisons, whose competency for the task cannot be doubted. If, under these circumstances, we cannot rely upon the accuracy of the accounts, I know not upon what testimony any fact should be received. Before we can discredit these returns we must believe that a great number of men of education and high character throughout the country have entered into a conspiracy together to deceive the Government and the public, and that too, in a matter where they can have no interest in deceiving, and in which they can hardly be themselves deceived. It must be confessed that it would be difficult upon less reliable testimony to believe, that in the county of Middlesex, including the Metropolis with its two millions of inhabitants, exposed to temptations of such various kinds, there should have been in 1845 no more than three persons of education convicted of any crime, and that in 1846, there should have been only one such person rendered amenable to the laws of his country. It may indeed be said that only one such person was actually punished in either of the two years, for in 1845 one of the three convicted was discharged from custody, the judgment having been arrested, and another having been found guilty of an assault was fined only one shilling and discharged. This fact is rendered still more extraordinary when we consider that the proportion of well educated persons is probably much greater in the Metropolis than in any other part of the kingdom. On referring to the only test existing upon this subject, the return of the Registrar-General of Births, Deaths, and Marriages, stating the proportionate number of persons who affix a cross instead of their signature to marriage registers, we shall see, that while in all England the proportions so signing with crosses in each 100, are 32·4 males and 49·2 females, the proportions in the Metropolis are only 12·1 males and 24·8 females.

It is perhaps equally calculated to produce surprise to find fifteen counties in England and eleven in Wales in which no person of good education was convicted of any crime during either of the years under examination. Among the English counties are some purely agricultural, as Bedford and Norfolk; others in which considerable manufactures are carried on, as Derby, Leicester, and Nottingham; and others, Durham and Monmouth, in which mining operations are extensively pursued. In the same favourable catalogue we find Oxfordshire, which will hardly be said to enjoy immunity from crime on the part of educated persons, through the fewness of the numbers of its population that come under that description.

We have not, it is true, any means whereby to ascertain, with any degree of certainty, the proportion of the population of England generally, nor of any county in particular, who have received a good education, but it is difficult for a moment to conceive that even in Wiltshire, when in 1845 the proportion of well educated convicts was as 1 to 177 of the whole number convicted, those educated up to the assumed standard did not bear a manifold greater proportion than this to the entire population; or that in Hertford, which furnished 149 convictions in 1846, only two of whom were of the educated class, the proportion of educated to uneducated persons

should be as only 1 to 74. Still more difficult would it be to persuade ourselves that the proportion throughout England and Wales was, in 1845, as 1 educated to 386 of the entire population, that being the proportion between educated and uneducated criminals, or that such proportion in 1846 should be 1 to 376. The only test that has hitherto been applied upon any extensive basis, whereby to judge of the proportions of instructed and uninstructed persons, is that already alluded to, which is brought forward in the reports of the Registrar-General of the number of persons, male and female, who sign their marriage registers or who place a mark in the absence of ability to write their names. This, it must be evident, is no test of education as carried to the degree in which we are now considering it, since it would certainly include all who in the criminal registers are recorded as writing well, together with a large proportion of those who are classed as reading and writing imperfectly.

The kindness of the Lord Advocate of Scotland enables me to present an analysis of the criminal returns for that part of the kingdom, so far as relates to well educated persons accused before the tribunals in 1846.

The whole number of persons accused last year in Scotland were,—males 2,901, females 1,168, together 4,069. Scotland thus appears to have a slight advantage over England and Wales, where the number of charges brought before the tribunals amounted to 1 in 634 of the population, while in Scotland the proportion was 1 in 646. There is, however, another and not an unimportant aspect in which England has a decided advantage over Scotland, viz., the proportion of females included in the criminal calendars. Taking as the basis of the calculation the population returns of 1841, we find that in England charges were brought in 1846 against 1 in 369 of the male, and 1 in 1,459 of the female population, whereas in Scotland the charges were brought against 1 in 428 males and 1 in 1,180 females.

As respects instruction the Scottish returns for 1846 as presented to Parliament were as follows:—

	Males.	Females.	Total.
Those who could neither read nor write .....	580	323	903
Those who read, or read and write, imperfectly .....	1,694	730	2,424
Those who read and write well .....	554	108	662
Those having received superior instruction .....	65	4	69
Those whose instruction could not be ascertained.....	8	3	11
Total .....	2,901	1,168	4,069

On subjecting the returns to re-examination in order to furnish the details which I had requested, it appeared that the numbers in the instructed class were in reality only 62 males and 4 females, together 66, the other three cases being those of persons not instructed beyond reading and writing well. Of these 66 persons, 9 were discharged by the Lord Advocate and his deputies without trial, and these it may therefore be presumed were charged wrongfully; four cases were found on trial “not proven,” five were acquitted, three



cases remained undisposed of at the end of the year, and forty-five were tried and convicted. It is with these forty-five cases I now proceed to deal.

I will first state briefly the whole number of committals, and the number among them who were well instructed during each of the eleven years from 1836 to 1846, thus affording materials for a comparison in the like respect with England.

	Total Number Charged with Offences.		Number of Persons Superiorly Instructed.		Centesimal Proportions which the Educated bore to the whole Number Accused.
	Males.	Females.	Males.	Females.	
1836 .....	2,223	699	54	1	1·88
1837 .....	2,391	735	65	3	2·17
1838 .....	2,609	809	91	2	2·72
1839 .....	2,490	919	54	3	1·67
1840 .....	2,866	1,006	67	4	1·83
1841 .....	2,533	1,029	39	3	1·17
1842 .....	3,025	1,164	88	4	2·19
1843 .....	2,737	878	63	1	1·77
1844 .....	2,617	958	36	1	1·03
1845 .....	2,515	1,022	52	3	1·55
1846 .....	2,901	1,168	62	4	1·62

The yearly average number of committals was 3,572, and of educated persons among them 63·63. The centesimal proportion has therefore averaged 1·78, or more than four times the proportion in England and Wales. The average number accused among the male population was 1 in every 472, and among the females 1 in every 1,460; while the educated were in the proportion of 1 in every 20,358 males, and 1 in every 522,811 females.

The 45 well instructed convicts were furnished by seventeen out of the thirty-two counties of Scotland (including the Orkneys, &c.), viz.:—

	Persons.		Persons.
Argyle.....	5	Nairn .....	1
Ayr .....	1	Zetland .....	1
Berwick .....	2	Renfrew .....	8
Dumbarton.....	1	Ross and Cromarty .....	1
Dumfries.....	1	Roxburgh .....	4
Fife .....	1	Selkirk .....	1
Forfar .....	1	Stirling .....	2
Lanark .....	9	Wigton .....	2
Linlithgow .....	4		

The proportion of the persons thus convicted to the population of the several counties was:—

Argyle.....	1 in 19,474	Nairn .....	1 in 9,217
Ayr .....	„ 164,356	Zetland .....	„ 30,558
Berwick .....	„ 17,219	Renfrew .....	„ 19,396
Dumbarton .....	„ 44,296	Ross and Cromarty ...	„ 78,685
Dumfries .....	„ 72,830	Roxburgh .....	„ 11,506
Fife .....	„ 140,140	Selkirk .....	„ 7,990
Forfar .....	„ 170,520	Stirling .....	„ 41,028
Lanark.....	„ 47,441	Wigton .....	„ 19,597
Linlithgow .....	„ 6,718		

There were, in 1846, fifteen Scottish counties, with a population of 993,590, which did not furnish any well educated criminals. The 3 educated females who were convicted were tried in the county of Lanark, all of them for theft. One, aged 46, was sentenced to transportation for seven years, and the other two, aged 23 and 38 respectively, were each imprisoned for two months.

It will be seen from the foregoing list of counties, that the educated class furnished no convicted offender in

Aberdeen	Edinburgh	Kinross
Banff	Elgin and Moray	Kirkcudbright
Bute	Haddington	Peebles
Caithness	Inverness	Perth
Clackmannan	Kincardine	Sutherland.

The nature of the crimes committed, and the ages of the 45 educated persons by whom they were committed were:—

	Under 15.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 40.	40 and under 50.	50 and under 60.	60 and upwards.	Total.
Housebreaking .....	...	...	...	1	2	...	...	...	3
Fraud .....	...	...	...	...	1	1	...	...	2
Assaults .....	...	1	1	3	4	3	4	1	17
Simple Theft .....	...	3	1	...	3	4	...	...	11
Riot.....	...	...	1	1	...	...	...	...	2
Malicious Offence .....	...	...	...	...	...	1	...	...	1
Forgery .....	...	...	...	1	...	3	...	...	4
Uttering Counterfeit Coin .....	...	...	...	...	...	1	...	...	1
Embezzlement.....	...	...	2	...	...	...	...	...	2
Minor Offences .....	...	...	...	...	2	...	...	...	2
Total .....	...	4	5	6	12	13	4	1	45

It thus appears, that in Scotland, as well as in England, there is not any criminality found among educated persons under 15 years, although the large proportion of 755 out of 4,069, or 18.55 per cent. of offences charged in Scotland applied to children under 16. In the next period of life, the number of well instructed persons committed was 6, of whom 4 were convicted; the whole number at those ages was 971. Between 20 and 30, the whole number committed was 1,301, while among the educated of that period of life the number of committals was 17, and of convictions 11. The proportions approximate more nearly in the later years of life. Of persons between 30 and 40, the total number committed was 636, of whom 17 were educated, and, of these, 12 were convicted. The total numbers between 40 and 50 were 319, of whom 17 were educated, and 13 of these were convicted. Between 50 and 60 years the number of committals was 136, 6 of them being educated, and 4 of these being convicted. Of persons above 60 years of age there were committed 45 persons, of whom only 1 was educated, and he was convicted of a simple assault and imprisoned for twenty days.



From the list already given of the crimes whereof educated persons were convicted, it will be seen that they were not generally of a very serious character.

3	were for Housebreaking—the whole number convicted of that crime was	247
2	„ Fraud „ „	36
17	„ Assaults „ „	639
11	„ Simple Thefts „ „	1,515
2	„ Riot „ „	58
1	was for a Malicious Offence „ „	53
4	were for Forgery „ „	30
1	was for Uttering Counterfeit Coin „ „	45
2	were for Embezzlement „ „	27
2	„ Minor Offences „ „	81

45

The punishments to which they were sentenced were as follows:—

Transportation—10 years .....	2	Brought forward.....	31
„ 7 „ .....	4	Imprisonment—10 days .....	1
	<u>6</u>	„ 8 „ .....	1
Imprisonment — 1 year .....	3		<u>2</u>
„ 8 months .....	1	Fined..... £20 0s. ....	1
„ 6 „ .....	1	„ 5 0 .....	4
„ 4 „ .....	3	„ 4 0 .....	1
„ 3 „ .....	4	„ 3 0 .....	2
„ 2 „ .....	5	„ 2 2 .....	1
„ 40 days.....	3	„ 2 0 .....	1
„ 1 month .....	1	„ 1 0 .....	1
„ 3 weeks .....	1	„ 0 5 .....	1
„ 20 days.....	3		<u>12</u>
	<u>25</u>	Total.....	45
Carried over .....	31		

The larger proportion of well instructed criminals in Scotland as compared with England no doubt arises (in great part at least) from the more general spread of education in that part of the kingdom, and seems to imply, that if the people at large should become more enlightened, the advantage of education in restraining from evil courses might be found in some degree fallacious. It must be evident that in any community where a part only of the people are educated, that part will be placed in more advantageous circumstances than the remainder for obtaining honest employments, and that if the whole number were equally enlightened such comparative advantage must disappear, in which case the restraining influences that accompany knowledge must be in some degree lessened. Further than this, it is probable that the greater knowledge of the educated class gives greater facilities for escape from the consequences of vicious courses, and enables persons by artfulness, or by a knowledge of the law, to evade punishments which would fall upon the more ignorant although not really the more vicious. All this may be conceded, and a most liberal allowance may be made for these circumstances as well as for the greater proportion of ignorant persons in the community, and yet it will be difficult to bring into anything like agreement the difference between the numbers of educated and uneducated criminals.

The examination into which I have been led of the criminal returns for England and Scotland, and the comparison which it was hardly possible to avoid making between them has been suggestive of some most interesting branches of investigation into which I cannot enter at this time, nor offer to them more than a cursory allusion.

The returns have now for several years been made so as to distinguish the nature of the offences committed into six different classes, viz.:—

- 1.—Offences against persons.
- 2.—Offences against property committed with violence.
- 3.—Offences against property committed without violence.
- 4.—Malicious offences against property.
- 5.—Forgery and offences against the currency.
- 6.—Other offences, not included in the above classes.

It appears that in 1846 the centesimal proportion of offences in England and Scotland in each of these classes was as follows:—

	England and Wales.	Scotland.
1st class .....	8·96	25·43
2nd „ .....	6·00	12·88
3rd „ .....	79·80	49·69
4th „ .....	0·83	2·55
5th „ .....	1·62	2·50
6th „ .....	2·79	6·95
All Classes.....	100·	100·

The number of committals for each class of offences, in proportion to the population of each division of the country was (in 1846) as follows:—

	England and Wales.	Scotland.
1st class.....	1 in 7,075	1 in 2,541
2nd „ .....	„ 10,558	„ 5,000
3rd „ .....	„ 794	„ 1,295
4th „ .....	„ 76,132	„ 25,438
5th „ .....	„ 39,191	„ 25,688
6th „ .....	„ 22,698	„ 9,258
All Classes .....	1 in 634	1 in 644

It thus appears that the commission of offences generally is less frequent in proportion to population in Scotland than in England, and the advantage of Scotland is in this respect greater than would appear from the criminal records, because of the existence in that division of the kingdom of a public prosecutor, an officer wanting in England, where, consequently, many offences are committed without public notice, by reason of the unwillingness of private persons to undertake the unpleasant and, in many cases, the expensive task of prosecuting.

It is shown by the above figures, that the unfavourable condition



of England in comparison with Scotland, is altogether confined to one class of offences, those against property committed without violence; in each of the other five classes the preponderance of evil is very greatly against Scotland. Thus, crimes against the person are more frequent in Scotland than in England, in any given proportion of the population in the ratio of 14 to 5. In the second class, offences against property committed with violence, the proportion is 2 to 1 against Scotland. In the fourth class, malicious offences against property, the disadvantage to Scotland is as 3 to 1. Forgery and offences against the currency are also more frequent in proportion to population in Scotland than in England, in the ratio of nearly 8 to 5; and in the sixth, or miscellaneous class of offences, the preponderance lies in the same direction, and is more than 11 to 5. That in the third class the preponderance of crime should be found against England should excite no surprise, when we consider how much greater the temptation is to invade the property of others in the richer than it can possibly be in the poorer division of the kingdom.

There is one fact, made apparent by the public records, which may serve to throw some light upon the circumstance of the greater frequency of crimes of violence in Scotland as compared with England. The consumption per head of ardent spirits in Scotland is nearly five-fold what it amounts to in England. The population of Scotland in 1841 was 2,620,184, and the spirits consumed in 1846 amounted 6,975,091 gallons, being an average quantity of 2·662 gallons for each individual, while in England a population of 15,911,757 consumed no more than 9,179,530 gallons, or 0·577 gallons for each.

It is foreign to my present object to pursue this branch of the subject any further. What has been said may serve to indicate how greatly man is the creature of circumstances, and how diffident we ought at all times to be in putting forth as truth any conclusions at which we may have arrived concerning human actions, upon data but too likely to be insufficient to the purpose.

Astonishing as the results here shown will probably appear to those persons who have not given much consideration to the subject, I will yet venture to suggest, that those results are not more favourable than we should have a right to expect, nay, that they are far less so than we should be certain to experience, if the people were universally educated to the degree that is attainable as regards their moral capabilities. As a proof that this suggestion is not a mere dream, or a flattering fancy, I would venture to call attention to the moral condition of that portion of our fellow-subjects who form the population of Nova Scotia. In that province ample provision is made for the education of every young person. For this purpose one-fifteenth part of the public revenue is every year set apart, in aid of still larger private contributions, and the result has long been most satisfactory. Owing to a want of faith in the efficacy of these means for the repression of crime, the Legislature of the Province has provided Courts of Justice and constructed gaols in each county, and has authorized the appointment of gaolers; but here their task has ended, since it has not hitherto been found necessary to appoint any such functionary. My friend Mr. Mc Gregor, in his

excellent work on British America, written in 1833, thus incidentally speaks of the people of Nova Scotia. "It is a matter of doubt whether more general and useful knowledge, among all grades of the population, can be discovered in any country, than will be found to prevail in this province. Many of those born and educated in it have distinguished themselves, not only at home but in different parts of the world, and the natives generally possess a ready power of apprehension, a remarkably distinct knowledge of the general affairs of life, and the talent of adapting themselves to the circumstances of such situations as chance, direction, or necessity may place them in." It appears that these our highly-favoured fellow-subjects are placed by the training of their minds and characters in a condition to bring home to their practical conviction that proverb which indeed meets with universal assent, but elsewhere is but too generally neglected in practice, that "Honesty is the best policy." Full of resources which have been imparted to him by his instructors, the Nova Scotian is, as Mr. Mc Gregor tells us, enabled to adapt himself to circumstances, and if one honest course be closed against him can open for himself another, looking beyond the present moment, and holding to the conviction that even as regards his worldly and temporal interests, he has everything to lose by swerving from the path of virtue. The man whose mind has not been opened is, on the contrary, cast down by the first disappointment that overtakes him; under the pressure of his immediate wants he unhappily loses sight of the interests of the future, and too often yields himself, in the hopelessness of his inability, to the first temptation that besets his path.

*Statement of the number of Females instructed beyond Reading and Writing, who were accused of Offences in the several Counties of England and Wales in each Year, from 1836 to 1846 inclusive.*

	1836	1837	1838	1839	1840	1841	1842	1843	1844	1845	1846
Bucks .....	1	..	..	..	..	..	..	..	..	..	..
Cambridge .....	..	..	..	..	..	..	..	1	..	..	..
Chester .....	..	1	..	..	..	..	..	2	..	1	..
Derby .....	..	..	1	..	..	..	..	..	..	..	..
Devon .....	1	..	..	..	..	..	..	..	..	1	..
Essex .....	..	1	..	..	..	..	..	..	..	..	..
Gloucester (including Bristol) ...	..	..	..	..	..	..	2	..	..	..	..
Lancaster .....	..	..	..	3	..	..	1	..	..	..	..
Middlesex (including London)....	..	..	1	..	..	..	..	..	..	..	..
Monmouth.....	..	..	..	..	..	..	..	1	..	..	..
Northumberland .....	..	..	1	..	..	..	..	..	..	..	..
Somerset .....	2	..	..	..	..	..	..	..	..	..	1
Southampton.....	2	..	..	..	..	..	..	..	..	..	1
Stafford .....	2	..	..	..	1	..	..	..	..	..	..
Surrey .....	1	..	..	..	..	..	..	..	..	..	..
Sussex .....	..	1	1	1	..	..	..	..	..	..	..
Warwick .....	..	..	..	..	..	..	..	..	1	..	..
Wilts .....	..	..	..	..	..	..	1	..	..	..	..
Worcester .....	..	..	..	..	..	..	..	1	1	..	..
York .....	5	..	1	..	..	..	..	1	..	1	..
Glamorgan .....	1	..	..	..	..	..	..	..	..	..	..
	15	3	5	4	1	..	4	6	2	3	2



## Offences charged against Persons Educated beyond Reading and Writing, in the

COUNTIES.	Sex.		Age.	OFFENCES.
	Males.	Females.		
Berks ....	1	..	35	Fraud ....
Bucks ....	1	..	61	Murder ....
" ..	1	..	33	Assault ....
Cambridge .....	1	..	36	Fraud ....
Chester .....	1	..	54	Forgery ....
" ..	1	..	52	Larceny ....
" ..	1	..	24	Ditto ....
" ..	1	..	30	Ditto ....
" ..	..	1	16	Ditto ....
Cornwall ....	1	..	29	Ditto ....
" ..	1	..	34	Illegally taking possession of Wrecked Property
" ..	1	..	61	Murder ....
Devon ....	1	..	29	Larceny ....
" ..	1	..	39	Ditto ....
" ..	..	1	17	Ditto ....
Dorset ....	1	..	21	Embezzlement ....
" ..	1	..	40	Forgery ....
" ..	1	..	26	Larceny ....
Essex ....	1	..	24	Embezzlement ....
" ..	1	..	28	Assault ....
" ..	1	..	22	Attempting to commit Suicide ....
" ..	1	..	65	Assault ....
" ..	1	..	28	Larceny ....
Gloucester with Bristol	1	..	20	Ditto ....
" ..	1	..	65	Receiving Stolen Goods....
" ..	1	..	23	Housebreaking ....
" ..	1	..	17	Larceny ....
" ..	1	..	18	Embezzlement ....
" ..	1	..	19	Larceny ....
Kent ....	1	..	51	Assault, with an Unnatural Intent
" ..	1	..	58	Assault ....
Lancaster ....	1	..	32	Larceny ....
" ..	1	..	26	Manslaughter ....
" ..	1	..	21	Uttering a Forged Instrument ....
" ..	1	..	28	Conspiracy to Defraud ....
" ..	1	..	26	Embezzlement ....
" ..	1	..	48	Disturbing a Religious Congregation
" ..	1	..	35	Assault ....
" ..	1	..	50	Ditto ....
" ..	1	..	43	Assault, with intent to Ravish ....
" ..	1	..	40	Embezzlement ....
Middlesex with London	1	..	24	Assault ....
" ..	1	..	31	Larceny ....
" ..	1	..	54	Keeping a Disorderly House ....
" ..	1	..	51	Uttering Forged Bill of Exchange
Carried forward ....	43	2		

*several Counties of England and Wales, in the year 1845, with the result of each case.*

[illegible]



*England and Wales,*

COUNTIES.	Sex.		Age.	OFFENCES.
	Males.	Females.		
Brought forward ....	43	2		
Middlesex with London	1	..	48	Unnatural Misdemeanour
Monmouth ....	1	..	38	Embezzlement
Norfolk ....	1	..	56	Ditto
Northumberland ....	1	..	18	Larceny
" "	1	..	25	Assault
Nottingham ....	1	..	35	Ditto
" "	1	..	19	Larceny
Southampton ....	1	..	22	Assault
" "	1	..	52	Embezzlement
" "	1	..	36	Larceny
Stafford ....	1	..	21	Ditto
" "	1	..	17	Ditto
" "	1	..	64	Assault
Suffolk ....	1	..	27	Arson
" "	1	..	43	Libel
" "	1	..	34	Larceny
Surrey ....	1	..	34	Assault
" "	1	..	40	Larceny
Sussex ....	1	..	26	Ditto
Warwick ....	1	..	23	Larceny
" "	1	..	29	Embezzlement
" "	1	..	49	Larceny
" "	1	..	34	Receiving Stolen Goods...
" "	1	..	18	Larceny
" "	1	..	24	Embezzlement
" "	1	..	50	Counterfeiting Foreign Silver Coin
" "	1	..	31	Murder
" "	1	..	27	Embezzlement
" "	1	..	30	Larceny
" "	1	..	18	Embezzlement
Wilts ....	1	..	24	Larceny
" "	1	..	19	Ditto
Worcester ....	1	..	20	Ditto
" "	1	..	22	Ditto
" "	1	..	34	Manslaughter
York ....	1	..	54	Curtilage Breaking
" "	1	..	46	Larceny
" "	1	..	20	Ditto
" "	1	..	35	Attempting to Steal from the Person
" "	1	..	37	Receiving Stolen Goods...
" "	..	1	21	Larceny
Anglesea ....	1	..	19	Ditto
" "	1	..	37	Ditto
Glamorgan ....	1	..	40	Ditto
Total, 1845 ....	86	3		

1845.—(Continued.)

Acquitted.	Convicted.	SENTENCES.														
		Death.	Transportation.					Imprisonment.					Fined.			
			Life.	Above 15 years.	Above 10 to 15 years.	Above 7 to 10 years.	7 years.	Above 3 years.	Above 2 years.	Above 1 year.	Above 6 months.	6 months and under.	£20 and upwards.	£10 to £20.	£5 to £10.	Under £5.
21	24	2	3	..	..	1	..	..	..	3	4	9	1	..	..	1
..	1	Judgment arrested.	..	..	..	Discharged.	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
..	1	Discharged on sureties.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44	45	3	3	..	..	1	4	..	..	3	6	21	1	..	1	1



*Offences charged against Persons Educated beyond Reading and Writing, in the*

COUNTIES.	Sex.		Ages.	OFFENCES.
	Males.	Females.		
Bucks ....	1	..	43	Forgery .....
Cambridge ....	1	..	39	Uttering Counterfeit Coin .....
Chester ....	1	..	21	Larceny ....
" "	1	..	55	Forgery ....
" "	1	..	31	Rape ....
" "	1	..	26	Libel ....
" "	1	..	39	Larceny ....
" "	1	..	36	Uttering Forged Receipt .....
Cornwall ....	1	..	45	Riot and Assault .....
" "	1	..	33	Ditto .....
Devon ....	1	..	38	Forgery ....
" "	1	..	22	Shop-breaking ....
" "	1	..	44	Manslaughter ....
Dorset ....	1	..	27	Larceny ....
Essex ....	1	..	31	Ditto ....
" "	1	..	22	Maliciously wounding ....
" "	1	..	40	Assault ....
Gloucester, with Bristol	1	..	23	Larceny ....
" "	1	..	52	Ditto ....
" "	1	..	23	Manslaughter ....
" "	1	..	20	Larceny ....
" "	1	..	31	Attempt to commit an Unnatural Crime .....
" "	1	..	35	Larceny ....
Hertford ....	1	..	23	Fraud ....
" "	1	..	26	Embezzlement ....
" "	1	..	34	Forging Request for Delivery of Goods .....
Kent ....	1	..	43	Larceny ....
" "	1	..	37	Ditto ....
" "	1	..	45	Ditto ....
" "	1	..	40	Ditto ....
Lancaster ....	1	..	22	Forgery ....
" "	1	..	26	Ditto ....
" "	1	..	47	Manslaughter ....
" "	1	..	29	Larceny ....
" "	1	..	22	Burglary ....
" "	1	..	23	Bigamy ....
" "	1	..	19	Fraud ....
" "	1	..	27	Larceny ....
" "	1	..	29	Forgery ....
Lincoln ....	1	..	35	Larceny ....
Middlesex, with London	1	..	56	Bigamy ....
" "	1	..	34	Assault ....
" "	1	..	50	Forgery ....
Northampton ....	1	..	33	Assault ....
" "	1	..	31	Larceny ....
Carried forward ....	45		....	

several Counties of England and Wales, in the year 1846, with the result of each case.

Acquitted.	Convicted.	SENTENCES.														
		Death.	Transportation.					Imprisonment.					Fines.			
			Life.	Above 15 years.	Above 10 to 15 years.	Above 7 to 10 years.	7 years.	Above 3 years.	Above 2 years.	Above 1 year.	Above 6 months.	6 months and under.	£20 & upwards.	£10 to £20.	£5 to £10.	Under £5.
1 :																



*England and Wales,*

COUNTIES.	Sex.		Ages.	OFFENCES.
	Males.	Females.		
Brought forward ....	45	..	....	....
Northumberland ....	1	..	35	Assault ....
Somerset ....	....	1	36	Fraud ....
Southampton ....	1	..	23	Forgery ....
"    "	1	..	21	Accessory to Murder ....
"    "	1	..	42	Assault ....
"    "	1	..	45	Uttering Forged Instrument ....
"    "	1	..	18	Stealing Money Letters ....
"    "	1	..	27	Murder ....
"    "	....	1	56	Larceny ....
Stafford ....	1	..	36	Ditto ....
"    "	1	..	27	Ditto ....
"    "	1	..	23	Abduction ....
"    "	1	..	36	Embezzlement ....
"    "	1	..	26	Forgery ....
"    "	1	..	45	Manslaughter ....
"    "	1	..	40	Assault ....
"    "	1	..	32	Forgery ....
"    "	1	..	29	Fraud ....
Suffolk ....	1	..	59	Larceny ....
"    "	1	..	24	Manslaughter ....
"    "	1	..	28	Fraud ....
Surrey ....	1	..	61	Assault ....
"    "	1	..	45	Do. ....
"    "	1	..	49	Murder ....
Warwick ....	1	..	22	Larceny ....
"    "	1	..	24	Embezzlement ....
"    "	1	..	25	Receiving Stolen Goods....
"    "	1	..	39	Ditto. ....
"    "	1	..	26	Larceny ....
"    "	1	..	24	Fraud ....
Wilts ....	1	..	27	Do. ....
Worcester ....	1	..	24	Larceny ....
"    "	1	..	20	Do. ....
"    "	1	..	25	Fraud ....
"    "	1	..	32	Bigamy ....
York ....	1	..	33	Larceny ....
"    "	1	..	40	Do. ....
"    "	1	..	40	Riot and Forcible Entry ....
"    "	1	..	29	Larceny ....
"    "	1	..	24	Embezzlement ....
	83	2	....	

1846.—(Continued.)

Acquitted.	Convicted.	SENTENCES.														
		Death.	Transportation.					Imprisonment.					Fines.			
			Life.	Above 15 years.	Above 10 to 15 years.	Above 7 to 10 years.	7 years.	Above 3 years.	Above 2 years.	Above 1 year.	Above 6 months.	6 months and under.	£20 & upwards.	£10 to £20.	£5 to £10.	Under £5.
21	24	..	..	..	1	3	1	..	..	3	4	10	..	..	1	1
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*Offences Charged against Persons Educated beyond Reading and Writing, in*

COUNTIES.			Sex.		Ages.	OFFENCES.
			Males.	Females.		
Argyle	....	....	1	..	35	Assault with intent to Ravish ....
"	"	"	1	..	37	Assault ....
"	"	"	1	..	23	Ditto ....
"	"	"	1	..	37	Theft by Housebreaking ....
"	"	"	1	..	47	Simple Theft ....
"	"	"	1	..	35	Ditto ....
"	"	"	1	..	30	Fraud ....
Ayr	....	....	1	..	30	Culpable Homicide ....
"	"	"	1	..	29	Riot, Breach of the Peace, &c ....
"	"	"	1	..	21	Furious Driving ....
Berwick	....	....	1	..	50	Assault ....
"	"	"	1	..	38	Ditto ....
"	"	"	1	..	16	Simple Theft ....
Dumbarton	....	....	1	..	28	Theft by Housebreaking ....
"	"	"	1	..	19	Minor Offence ....
Dumfries	....	....	1	..	47	Malicious Offence ....
Edinburgh	....	....	1	..	19	Assault ....
"	"	"	1	..	42	Stealing Letter from Post Office ....
Fife	....	....	1	..	34	Simple Theft ....
"	"	"	1	..	23	Fraud ....
Forfar	....	....	1	..	37	Assault ....
"	"	"	1	..	45	Simple Theft ....
Haddington	....	....	1	..	50	Assault with intent to Ravish ....
Inverness	....	....	1	..	53	Fraud ....
"	"	"	1	..	40	Fraudulent Bankruptcy ....
"	"	"	1	..	44	Breach of Peace ....
Lanark	....	....	1	..	53	Assault ....
"	"	"	1	..	30	Theft by Housebreaking ....
"	"	"	1	..	15	Simple Theft ....
"	"	"	1	..	38	Ditto ....
"	"	"	1	..	17	Ditto ....
"	"	"	..	1	46	Ditto ....
"	"	"	..	1	23	Ditto ....
"	"	"	..	1	38	Ditto ....
"	"	"	1	..	40	Fraud ....
"	"	"	1	..	21	Ditto ....
"	"	"	1	..	27	Forgery ....
Linlithgow	....	....	1	..	40	Assault ....
"	"	"	1	..	29	Ditto ....
Carried forward ....			36	3		

the several Counties of Scotland in the year 1846, with the results of each case.

Discharged without Trial.	Not Proven.	Acquitted.	Convicted.	SENTENCES.								
				Trans- portation.		Imprisonment.			Fines.			
				10 years.	7 years.	1 year.	Above 6 months.	6 months and under.	£20.	£5.	£1 and under £5.	Under £1.
1 :												



*Scotland,*

COUNTIES.	Sex.		Ages.	OFFENCES.
	Males.	Females.		
Brought forward ....	36	3		
Linlithgow ....	1	..	18	Simple Theft ....
"    " ....	1	..	43	Forgery ....
Nairn ....	1	..	41	Assault ....
"    " ....	1	..	20	Ditto ....
Zetland ....	1	..	21	Riot ....
Perth ....	1	..	28	Murder ....
Renfrew ....	..	1	24	Ditto ....
"    " ....	1	..	36	Assault ....
"    " ....	1	..	45	Ditto ....
"    " ....	1	..	63	Ditto ....
"    " ....	1	..	46	Ditto ....
"    " ....	1	..	29	Ditto ....
"    " ....	1	..	31	Ditto ....
"    " ....	1	..	25	Ditto ....
"    " ....	1	..	42	Simple Theft ....
"    " ....	1	..	39	Minor Offence ....
Ross and Cromarty ....	1	..	18	Assault ....
"    " ....	1	..	25	Embezzlement ....
Roxburgh ....	1	..	52	Assault ....
"    " ....	1	..	36	Ditto ....
"    " ....	1	..	54	Ditto ....
"    " ....	1	..	24	Embezzlement ....
Selkirk ....	1	..	40	Forgery ....
Stirling ....	1	..	43	Ditto ....
"    " ....	1	..	40	Uttering Counterfeit Coin ....
Wigtown ....	1	..	24	Embezzlement ....
"    " ....	1	..	36	Minor Offence ....
Total ....	62	4		

1846.—(Continued.)

Discharged without Trial.	Not Proven.	Acquitted.	Convicted.	SENTENCES.								
				Trans- portation.		Imprisonment.			Fines.			
				10 years.	7 years.	1 year.	Above 6 months.	6 months and under.	£20.	£5.	£1 and under £5.	Under £1.
7	4	5	23	2	2	3	1	10	..	2	3	..
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9	4	5	45	2	4	3	1	22	2	4	7	1



*Statement of the number of Persons instructed beyond Reading and Writing, who were accused of Offences in the several Counties of England and Wales in each year, from 1836 to 1846 inclusive.*

	1836	1837	1838	1839	1840	1841	1842	1843	1844	1845	1846
Bedford .....	1	..	..	..	..	..	..	..	1	1	..
Berks .....	..	..	..	..	..	..	..	..	..	..	..
Bucks .....	6	..	..	2	..	..	1	3	1	2	1
Cambridge .....	..	3	..	1	4	..	3	2	..	1	1
Chester .....	14	8	3	12	9	1	5	14	9	5	6
Cornwall .....	2	..	1	..	2	..	..	1	..	3	2
Cumberland .....	1	..	..	..	..	..	..	..	..	..	..
Derby .....	..	..	2	..	..	..	..	2	..	..	..
Devon .....	4	1	1	..	..	..	..	4	4	3	3
Dorset .....	..	..	..	..	..	..	..	1	2	3	1
Durham .....	3	..	..	..	2	..	1	..	..	..	..
Essex .....	1	2	4	2	1	4	..	3	5	5	3
Gloucester (including Bristol) ..	6	..	..	5	..	1	2	1	5	6	6
Hereford .....	4	1	2	..	..	..	..	..	..	..	..
Hertford .....	1	..	3	..	1	..	..	1	2	..	3
Huntingdon .....	3	..	2	1	1	..	..	..	..	..	..
Kent.....	8	8	4	3	10	9	3	1	3	2	4
Lancaster .....	10	11	8	9	21	26	20	10	7	10	9
Leicester .....	..	..	..	..	..	..	..	..	1	..	..
Lincoln .....	8	2	..	..	..	1	..	4	3	..	1
Middlesex (including London) ..	25	12	7	3	1	28	2	17	10	5	3
Monmouth .....	..	..	..	..	1	..	..	4	..	1	..
Norfolk .....	7	4	4	2	..	1	1	4	1	1	..
Northampton.....	..	..	1	..	3	..	..	1	..	..	2
Northumberland .....	3	1	1	1	..	2	..	2	1	2	1
Nottingham .....	2	2	1	..	2	1	..	1	..	2	..
Oxford.....	..	..	..	..	..	..	..	..	..	..	..
Rutland .....	..	..	..	..	..	..	..	..	..	..	..
Salop .....	2	..	..	2	2	..	..	1	2	..	..
Somerset.....	3	..	..	1	6	17	..	1	1	..	1
Southampton.....	7	2	..	1	1	..	..	4	6	3	7
Stafford .....	4	4	2	2	8	8	7	10	10	3	9
Suffolk.....	..	..	4	2	..	..	..	2	2	3	3
Surrey .....	12	9	2	5	5	6	1	3	..	2	3
Sussex .....	5	5	2	3	..	..	..	..	..	1	..
Warwick .....	6	4	4	2	7	9	3	5	22	11	6
Westmoreland .....	..	..	1	..	..	..	2	..	..	..	..
Wilts .....	1	..	..	..	2	2	6	7	3	2	1
Worcester .....	3	4	..	2	1	1	4	6	1	3	4
York.....	32	16	15	10	9	9	7	22	6	6	5
Anglesea .....	1	..	1	1	1	..	..	1	..	2	..
Brecon .....	..	..	1	..	..	..	1	2	1	..	..
Cardigan .....	..	..	..	1	..	..	..	..	..	..	..
Caermarthen .....	..	..	..	..	..	..	..	..	..	..	..
Carnarvon .....	..	..	..	..	..	..	..	..	..	..	..
Denbigh .....	..	..	..	..	..	..	..	..	..	..	..
Flint.....	..	..	..	..	..	..	..	..	..	..	..
Glamorgan .....	3	1	..	3	1	..	..	..	1	1	..
Merioneth .....	1	..	..	1	..	..	..	..	..	..	..
Montgomery .....	..	..	3	..	..	..	..	..	..	..	..
Pembroke .....	2	1	..	1	..	..	..	..	1	..	..
Radnor.....	..	..	..	..	..	..	..	..	..	..	..
	191	101	79	78	101	126	69	140	111	89	85
	176 Males, 15 Females.	98 Males, 3 Females.	74 Males, 5 Females.	74 Males, 4 Females.	100 Males, 1 Female.	All Males.	65 Males, 4 Females.	134 Males, 6 Females.	109 Males, 2 Females.	86 Males, 3 Females.	83 Males, 2 Females.

1,170

1,125 Males.  
45 Females.

*Statistical Account of the Markets of London.* By JOSEPH FLETCHER, Esq., Barrister at Law, Honorary Secretary.

[Read before the Statistical Society of London, 17th May, 1847.]

IN the unlettered ages in which tokens, witnesses, and the use of public weights and measures, were necessary to the secure transaction of all that now appears in every tradesman's books, the holding of a fair or market involved the exercise of a jurisdiction of police, and of civil and criminal justice in the court of *pie poudre*, incident to such a concourse; which jurisdiction could not legally be exercised without the king's grant or license. The grant of a fair or market was therefore, in fact, a grant of jurisdiction over the traffic of the district which it served, the exercise of which was remunerated with a profit by the tolls and fines, which belonged to the lord or community to whom the grant was made, and formed a property which could not legally be invaded by the establishment of any other market within seven miles, or the third of a day's journey.

Hence the common law principle, that to effect a legal transfer of goods the bargain must be made in *market overt*; a term, however, which in London, from time immemorial, was held to include every shop in the city, for the purposes of its especial trade, and to extend to every day of the week, except Sunday. But, in the exercise of that intimate interference with trade, which is so remarkable a characteristic of our early municipal institutions, it was still required that all goods sold in gross should be weighed or troned at the king's or common beams, under the general superintendence of the clerk of the market, whose office devolved customarily upon the chief officer, and is still nominally held by the Lord Mayor; and a weigh-house existed until a comparatively recent period in Eastcheap, in the care of a master and other officers, with porters, carts, and horses to fetch the goods to be weighed. Before describing the existing markets of the city, it will be well, however, to give a brief sketch of those annual markets called Fairs, against the erection of which, in the neighbourhood of the city, no customary law held good.

*Fairs* were granted by the Crown at an early period to several religious houses contiguous to the cities of London and Westminster; but the charter granted to the city, 1 Edw. III. (sect. 12), contains a declaration that no market shall be granted by the Crown to be holden within seven miles all round about the city, which grant was renewed nearly in the same terms by the charter of 14 Charles I.; and under these grants the Corporation has always insisted on the necessity for its consent being obtained to the establishment of any market within those limits. Even when the Corporation has not opposed bills in Parliament for such markets, it has been usual to require their formal consent under the city seal before the Act could be passed.

The once too well-known fair of St. Bartholomew appears to have been the only one of the city fairs which survived the Reformation, and has always consisted, in fact, of two fairs, held on contiguous grounds at the same time; at first for two entire days only, the fairs being proclaimed on the eve of St. Bartholomew, and continued during the day of St. Bartholomew, and the next morrow. Both these fairs



or markets were granted for the purposes of trade; one to the prior and convent of St. Bartholomew, "for the clothiers of England and drapers of London, who had their booths and standings within the churchyard of the priory, closed in with walls and gates, and locked every night, and watched for the safety of their goods and wares;" and the other to the city of London, consisting of "the standing of cattle and stands and booths for goods, with pickage and stallage and tolls and profits appertaining to fairs and markets, in the field of West Smithfield." At the dissolution of the monasteries, in the reign of Henry VIII., the right in the first-mentioned fair was sold to Sir John Rich, the then Attorney-General, and was enjoyed by his descendants till the year 1830, when it was purchased from Lord Kensington by the Corporation, and is now held by the Chamberlain of London and Town Clerk, as trustees; so that in fact all the rights and interests in both fairs are now vested in the Corporation\*.

The license for many years granted by the Corporation for mountebanks, conjurers, &c., to exercise their amusing vagabondism at the fair extended to fourteen days, during which period it was for several years allowed to be held. "In those times the fair was frequently presented by grand juries as a nuisance, and the complaints of sober-minded citizens were loud and long-continued against the riotings and debaucheries to which it gave rise. The depressed state of the corporation revenues at that time compelled them, however, to supply their wants by tolerating the continuance of these irregularities; and the sword-bearer and other city officers were partly paid out of emoluments derived from that discreditable source.

"In consequence of these complaints, various orders were at different times made by the Corporation for the purpose of limiting and regulating the fair; and in the year 1735 in particular, the Court of Aldermen resolved 'that Bartholomew Fair shall not exceed Bartholomew-eve, Bartholomew-day, and the next morrow, and shall be restricted to the sale of goods, wares, and merchandises usually sold in fairs.' It is at all times difficult, however, by law, to put down the ancient customs and practices of the multitude. Hence we find that great resistance was offered to the enforcement of these regulations. In 1760, Mr. Birch, the Deputy City Marshal, lost his life in the attempt, and the practices which those regulations were intended to prevent, have prevailed more or less to the present time†."

In 1840, however, the London City Mission memorialized the Common Council very strongly on this subject; and their memorial having been referred to the Markets' Committee, the latter sought the advice of the City Solicitor, from whose report the preceding extracts are made. Taking into consideration the improved habits of the working classes of the present day, and the success which has attended the suppression of May Fair and the Lady Fair, in Southwark, held under a grant to the Corporation of London, the City Solicitor recommended a re-adoption of the measures taken in 1723, in the confident anticipation, since it had ceased in any degree to be a fair for actual business (to the transaction of which it would thus be almost entirely

\* Report of the City Solicitor to the Markets' Committee, 19th June, 1840. Common Council Minutes of 1840, pp. 246-7.

† Ibid., pp. 246-7.

restricted) that many years would not elapse before the Corporation might omit to proclaim the fair, and thus suppress it altogether, without exciting any of these feelings of discontent and disapprobation with which its compulsory abolition would probably be attended. This advice was followed by the Committee and the Common Council, with a success which has been all but complete.

*Markets.*—At first the only markets were those assigned in the open streets and places, each for particular commodities, and in some of which it was required that all sales by “foreigners” should take place; otherwise the goods were liable to seizure by an officer of the Corporation called the “Foreign Taker.” Afterwards Blackwell Hall was erected contiguous to the Guildhall, for woollen cloth, and others elsewhere; but to trace all the changes which have occurred in regard to the city markets would far exceed our limits. It must suffice to point out that the authority of the Corporation is now restricted merely to regulating the hours and taking the tolls of the five which still exist, and seeing that they shall be properly disposed, and in a fit condition for the resort of the public, and of the dealers in them. Certain regulations, however, are made under statute, for the drovers of Smithfield, as already stated; and statutes of the 10th and 11th of William III., c. 24, 33rd of George III., c. 27, and 42nd of George III., c. 8, regulate vessels bringing fish to Billingsgate, from the time of their entrance into the river, &c.

The present city markets, or Corporation markets, are, that of Smithfield, on Mondays and Fridays, for horses, cattle, sheep, and pigs; and on Tuesdays, Thursdays, and Saturdays, for hay and straw; that of Newgate, between Newgate-street and Paternoster-row, every week-day, for butchers’ meat, chiefly by wholesale, poultry, and fruit; that of Leadenhall, under the walls of the India House, every week-day, but especially on Tuesday, Thursday, and Saturday, for butchers’ meat, chiefly by wholesale, poultry, fish, and vegetables, and on Mondays and Fridays for leather and raw hides; Farringdon Market, on the west side of Farringdon Street, formerly occupied by Fleet Market, on every week-day, but especially Tuesday, Thursday, and Saturday, for butchers’ meat, vegetables, and fruit; and that of Billingsgate, in Lower Thames-street, on every week-day, for fish. In fact, all the markets are simply provision markets, with the exception of the Smithfield markets for cattle and provender, and the Leadenhall markets for hides and leather. Honey-lane Market was abolished only a few years ago, and the Corporation School has been erected on its site.

The following are the tolls and dues taken at these markets, which appear to be imposed by acts of Common Council, and not merely regulated by custom.

#### SMITHFIELD MARKET.

##### *Dues.*

Sheep, calf, and pig pens (permanent pens) 1*s.* each, and hurdle pens, 10*d.* each.

Tyes of beast, 1*d.* each.

Tyes of calves, 1*d.* each.

Tyes of horses, 2*d.* each.

Hay duty, 6*d.* per load, unless the property of freemen, &c., and 1*d.* each entry of sale.

Straw duty, 1*d.* each entry of sale.



*Tolls.*

Sheep sold belonging to non-freemen, 2*d.* per score.

Beasts sold belonging to non-freemen, 20*d.* per score.

Horses, 4*d.* each for entry of sale.

Pigs, 4*d.* per score.

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NEWGATE MARKET.

*Tolls, &c.*

	<i>s.</i>	<i>d.</i>
For every bushel of fruit .....	0	0½
For every maund (about two bushels) .....	0	1
For every sieve .....	0	0½
For every man's load.....	0	1
For every cart drawn by one horse .....	0	4
For every cart drawn by two horses.....	0	6
For every waggon .....	1	0
For every sack of potatoes .....	0	3
For every hamper of meat .....	0	1
For every bundle of ditto .....	0	2
For every pack of ditto.....	0	6
For every hamper or coop of poultry .....	0	1
For every flat of butter, eggs, and poultry .....	0	1

*Shops and Hanging-rails.*

The rents are regulated according to the size, &c.

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LEADENHALL MARKET.

*Poultry Market Tolls.*

	<i>s.</i>	<i>d.</i>
For every basket, if pitched under cover.....	0	1½
„ not under cover .....	0	1

*Wholesale Meat Market.*

	<i>s.</i>	<i>d.</i>
For a pack of meat above 40 stone .....	0	6
„ under ditto.....	0	3
Score of sheep or lambs .....	1	0
Calf .....	0	2
Quarter of beef .....	0	1½
Hamper of meat .....	0	1½
Tray of beef .....	0	1
Pig .....	0	1

*Country Dealers, for Toll and use of Hanging-rail, &c.*

	<i>s.</i>	<i>d.</i>
Pig .....	0	3
Basket of offal, &c. ....	0	1½

*Shops, &c.*

The rents are regulated according to the size, &c.

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## FARRINGTON MARKET.

*Tolls, &c. for Standings :**Yearly Standings.*

For every waggon or cart-stand and pitching-stand, a rent after the rate of 9*d.* per square foot per annum.

*Casual Standings:*

For every waggon or contents of a waggon (except potatoes) to be pitched, 1*s.*

For every cart or contents of a cart (except potatoes) to be pitched, 9*d.*

For every waggon or cart-stand, with or without pitching-stand adjoining, if by the day, 1*s.*

For every pitching-stand, without a waggon-stand, if by the day, 6*d.*

Potatoes, 2*d.* per sack, and at the rate of 1*s.* per ton for any greater or less quantity.

Vegetables or fruit in sacks, 1*d.* per sack.

Ditto, in baskets containing more than a sieve, 1*d.* per basket.

Ditto, ditto, containing a sieve or less, one halfpenny.

Oranges per chest, 4*d.*

Ditto per box, 2*d.*

Pitching-stands under the roof of the building, if let to tenants of opposite shops, 2*s.* per week.

Ditto, if let to any other than such tenants, 5*s.* per week.

For the use of the scales, halfpenny per draught.

*Shops.*

The rents are regulated according to size, &c.

## BILLINGSGATE MARKET.

*Market Dues.*

Wholesale stands, 54 feet superficial, each, including the use of table and a gas-light, 9*s.* per week.

Retail stands, from 3*s.* to 5*s.* per week.

Casual stands, 6*d.* per day.

Sheds for muscle and other shell fish, 1*s.* per day.

Long or sea boats, oyster boats, and muscle boats 1*s.* each.

Long or sea boats, oyster boats and muscle boats, 1*s.* each.

Small boats (including plank) 1*s.* 7*d.* each.

Vessel with salt fish or fruit, 2*s.* 8*d.* for first day, and 1*s.* 8*d.* every other day, including 1*s.* for plank.

Long boats, salt and fruit vessels, for plank 1*s.* each.

Wherries with salt or other fish, 1*s.* each.

Peter boats having salt water fish or fresh salmon, 6*d.* each.

Ditto having fresh water fish, 2*d.* each.

Small or river boat with fish of foreigners, charged the same as long or sea boats.

Oyster metage, halfpenny per bushel.

Fish carriage with open bulk, 1*s.* each.

Pads and pots of fish, halfpenny each.

*Market Dock Dues.*

Oyster boats for groundage (3 days) 6*d.* per boat.

Ditto, for use of ladder, &c., 5*d.* per boat.

Long or sea and small or river boats (except oyster boats), 2*d.* each.

Salt vessels 2*s.* 6*d.* per day (including 1*s.* for plank).



*Statement of the Average Prices of Butchers' Meat as sold in the London Markets, distinguishing the various kinds in each year from 1841 to 1844 inclusive.*

Description.	Price per Stone of 8 lbs.				
	1840.	1841.	1842.	1843.	1844.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Inferior Beasts .....	3 1	3 4 $\frac{1}{2}$	3 4 $\frac{1}{2}$	2 8 $\frac{3}{4}$	2 7 $\frac{1}{4}$
2nd class .....	3 6	3 9	3 7	3 2 $\frac{1}{2}$	3 1
3rd class, (Large Prime) .....	3 11 $\frac{3}{4}$	4 2 $\frac{1}{4}$	3 11 $\frac{1}{4}$	3 7	3 5 $\frac{3}{4}$
4th class, (Scots) .....	4 5 $\frac{3}{4}$	4 7 $\frac{1}{2}$	4 5 $\frac{1}{4}$	3 10 $\frac{1}{4}$	3 10 $\frac{3}{4}$
Inferior Sheep .....	3 5	3 6 $\frac{1}{2}$	3 5 $\frac{1}{2}$	3 0 $\frac{1}{2}$	2 11
2nd class .....	3 10 $\frac{1}{4}$	3 10 $\frac{1}{4}$	3 10	3 5	3 5 $\frac{3}{4}$
3rd class, (Long Coarsed } Wooled) .....	4 5	4 4 $\frac{1}{2}$	4 1 $\frac{1}{2}$	3 10	3 8 $\frac{1}{4}$
4th class, (South Downs) .....	4 9 $\frac{1}{4}$	4 11	4 5 $\frac{3}{4}$	4 1	4 0 $\frac{1}{2}$
Lambs .....	6 0	5 5 $\frac{1}{2}$	5 5	4 9 $\frac{1}{2}$	5 0 $\frac{1}{4}$
Coarse Calves .....	4 8	4 11	4 2	3 9 $\frac{3}{4}$	3 8 $\frac{1}{2}$
Small Prime Calves .....	5 4	5 5 $\frac{1}{2}$	4 9 $\frac{3}{4}$	4 4 $\frac{1}{2}$	4 3 $\frac{3}{4}$
Large Hogs .....	4 3 $\frac{1}{2}$	4 5 $\frac{1}{2}$	4 4 $\frac{3}{4}$	3 5	3 3 $\frac{1}{2}$
Small Neat Porkers .....	4 9 $\frac{1}{4}$	4 10 $\frac{1}{2}$	4 10 $\frac{3}{4}$	3 11 $\frac{1}{2}$	3 10 $\frac{1}{2}$

*An Account of the Total Number of Cattle and Sheep sold in Smithfield Market in each Year from 1833 to 1844 inclusive.*

	Cattle.	Sheep.	Calves.
1833	152,093	1,167,820	....
1834	162,485	1,237,360	....
1835	170,325	1,381,540	....
1836	164,351	1,219,510	....
1837	172,435	1,329,010	....
1838	183,362	1,403,400	....
1839	180,780	1,360,250	....
1840	177,497	1,371,870	....
1841	194,298	1,435,090	....
1842	175,347	1,468,960	....
1843	175,133	1,571,760	19,113
1844	186,191	1,609,130	19,011

Previous to 1835, the City Markets were under the management of the City Lands' Committee, but in that year the duties of this Committee, in their regard, were transferred to a special committee, which, in December, 1842, made a return of its duties as being, "to view the several markets; to let the shops, stalls, and standings, and see that the tolls are properly and faithfully collected and paid into the Chamber; to carry into execution the orders of the Common Council (originated by the Committee itself) in relation to alterations or improvements in the markets; to prevent the sale of improper articles, and

institute legal proceedings for that purpose, if necessary; to audit the accounts of the collectors, and take securities from them; to appoint the collector and the constables of the Poultry Market, Leadenhall, the constable of Newgate Market, and a beadle and watchman in Farringdon Market." This superintendence extends also to the residence of the collector of Smithfield Market in Durham Yard\*. Two hundred pounds is allowed to this Committee yearly for its entertainments†. It holds its business meetings on the third Friday in each month. The gross produce of the market tolls and dues in 1833, was £18,013 18s 4 $\frac{3}{4}$ d.; in 1839, £19,427 10s. 6 $\frac{1}{4}$ d.; in 1840, £19,205 16s. 6d.; in 1841, £18,944 8s. 8d., and in 1842, £18,204 17s. 0 $\frac{1}{2}$ d.

*Income from and Expenditure upon the Markets of the City of London in the year 1842, from the Corporation "Statement of the Produce and Expenditure of the City's Estate, 1842."*

INCOME.			
	£	s.	d.
Leadenhall Market .....	2,501	5	11
Newgate Market .....	3,941	11	1
Farringdon Market .....	997	16	2
Smithfield Market .....	7,201	12	2
Billingsgate Market, including payments under the arrangements for purchasing the rights of alienation of certain officers of the Lord Mayor's household, pursuant to the Order of the Court of Common Council of the 20th December, 1822 .....	3,562	11	8 $\frac{1}{2}$
Total .....	18,204	17	0 $\frac{1}{2}$

EXPENDITURE.			
Leadenhall Market .....	1,542	7	1
Newgate Market .....	1,134	13	9
Farringdon Market .....	876	11	8
Smithfield Market .....	1,778	15	8
Billingsgate Market .....	1,581	14	0
To several officers of the Lord Mayor's Household, the allowances payable in compensation for surrendering to the Corporation the right of alienating their places, and for other advantages given up by them connected with the profits of Billingsgate Market, &c., pursuant to an arrangement made with the Court of Common Council 30th January, 1823 .....	1,555	5	10
To the Market's Committee, one year's allowance, per order Court of Common Council, 16th February, 1838 .....	200	0	0
Miscellaneous market charges and expenses .....	209	16	1
Total .....	8,879	4	1
Balance in favour of the City's cash .....	£9,325	12	11 $\frac{1}{2}$

\* Minutes of Common Council, 19th Dec., 1842, pp. 287-8.

† Order of Common Council, 16th Feb., 1838.



*Appointment and Emoluments of the Officers and Servants of the Corporation employed in the City Markets in 1833.*

(From the Report of the Revenue Committee of the Court of Common Council in 1836, and the Report of the Corporation Inquiry Commissioners, laid before Parliament in 1837, &c.)

Officers.	By whom Appointed.	EMOLUMENTS.			
		Nature of Emoluments.	From City's Cash.	From other Sources.	Total.
SMITHFIELD MARKET. Collector, Thos. Shank, succeeded in 1841 by Wm. Shank.	Annually by the Court of Common Council, £1,000 security.	Allowance per annum .....	£ s. d. 250 0 0	£ s. d.	£ s. d.
		Fees and emoluments .....	.. .. .	16 4 0	
		Estimated value of residence ..	30 0 0		
		¶ Subject to deduction for expenses and assistance of £41 4s.	200 0 0	16 4 0	296 4 0
Assistant Collector, Thomas Field.	Annually by the Committee of City Lands, £200 security.	Salary .....	50 0 0		
		Fees .....	.. .. .	8 7 0	58 7 0
Collector of Tolls, Henry J. Tarling.	By the Chamberlain.	Allowance for collecting tolls ..	107 11 0		
		Fees, &c. ....	.. .. .	10 10 0	118 1 0
Assistant Collector of Tolls, William Shank.	By the Chamberlain.	¶ Subject to expense of £20 16s. for assistance in collecting pig toll.			
		Allowance on collection .....	54 12 0		
		Other emoluments .....	.. .. .	3 0 4	57 12 4
			492 3 0	38 1 4	530 4 4
NEWGATE MARKET. Collector, William Fisher.	Annually by the Common Council, £1,000 security.	The Chamberlain, besides making these two appointments, has an allowance for keeping the account and superintending the said tolls of, per annum .....	100 0 0	.. .. .	100 0 0
		Total of Smithfield Market ..	592 3 0	38 1 4	630 4 4
		Commission of £4 per cent. on the amount of rent, tolls, &c. }	151 14 11	.. .. .	151 14 11
Constable, J. B. Kentish.	Annually by the Markets' Committee.	Allowance 30s. per week .....	78 0 0		
		Expense of great coat, hat, and boots, yearly .....	7 7 0	.. .. .	85 7 0
LEADENHALL MARKET. Collector of Meat Market, Robert Curties.	Annually by the Markets' Committee; £500 security.	Total of Newgate Market ..	237 1 11	.. .. .	237 1 11
		Allowance for collection of rents, &c. ....	72 16 0		
		Allowance on tolls from non-freemen .....	.. .. .	14 5 0	87 1 0
Collector of Poultry Market, Thos. Dawson, succeeded in 1840 by Wm. Davidson.	Annually by the Markets' Committee; £500 security.	For collection of rents, &c. ....	72 16 0		
		Allowance on casual tolls .....	.. .. .	6 10 0	79 6 0
Constable, John Grimes.	Annually by the Markets' Committee.	Allowance 30s. per week .....	78 0 0		
		Expense of great coat, hat, and boots, yearly .....	7 2 0	.. .. .	85 2 0
		Total of Leadenhall Market	230 14 0	20 15 0	251 9 0
		Carried over .....	1,059 18 11	58 16 4	1,118 15 3

*Appointment and Emoluments of the Officers and Servants of the Corporation employed in the City Markets in 1833.—(Continued.)*

Officers.	By whom Appointed.	EMOLUMENTS.			
		Nature of Emoluments.	From City's Cash.	From other Sources.	Total.
<b>FARRINGTON MARKET.</b>					
<i>Principal Market Clerk or Collector, A. W. I. Harrison.</i>	Annually by the Committee of City Lands under spe- cial order of the Court of Common Council; £1,000 security.	Salary .....	£ s. d. 1,059 18 11	£ s. d. 58 16 4	£ s. d. 1,118 15 3
<i>Second Clerk or Assistant Collector, Richard Freeman.</i>	By the Committee of City Lands; £1,000 security.	Estimated value of residence } per annum .....	130 0 0 30 0 0	.....	160 0 0
<i>Constable, James Lloyd.</i>	Annually by the Committee of City Lands.	Salary £2 6s. per week.....	78 0 0 7 7 0	.....	85 7 0
<i>Watchmen, Sheridan and Johnson.</i>	By the Markets' Committee.	Allowance of 23s. each per week Coat every third or fourth year	119 12 0 1 5 0	.....	120 17 0
<b>HONEY LANE MARKET.</b>					
<i>Collector, George Pead.</i>	Annually by the Committee of City Lands; £1,000 se- curity.	Allowance 10s. per week.....	485 16 0	.....	485 16 0
<b>BILLINGSGATE MARKET.</b>					
<i>Clerk and Collector, John Goldham, also First Serjeant of the Chamber, a Yeoman of the Water Side, and a Salt Meter.</i>	Nominated by the Committee of City Lands, and ap- pointed by the Common Coun- cil; £1,000 se- curity.	Total of Farringdon Market	26 0 0 20 0 0	.....	26 0 0
<i>Assistant Clerk and Collector, Michael Hurlock.</i>	During pleasure by the Clerk.	Allowance 10s. per week.....	20 0 0	.....	26 0 0
<i>First Labourer and Constable, John Robinson.</i>	Appointed by the Clerk and Col- lector.	Salary per Order Common } Council .....	300 0 0 100 0 0	.....	400 0 0
<i>Detector of Bad Fish, Searle.</i>		Gratuity for extra services.....	104 0 0 9 6 6	.....	113 6 6
<i>Second Labourer and Constable, David Holley.</i>	Appointed by the Clerk and Col- lector.	Allowance per annum .....	65 0 0 12 0 0	.....	65 0 0
<b>Total expenses of collection, &amp;c.</b>					
2,208 1 5 58 16 4 2,266 17 9					



*Detail of the Expenses of the Markets in 1833.*

	Collecting and other Expenses.			Taxes, Rates, &c.			Repairs.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Leadenhall .....	272	16	4	396	2	6	115	13	6	784	12	4
Newgate .....	246	8	6	654	10	0	104	7	0	1,005	5	6
Smithfield Rents .....	861	5	5	1,061	13	10	469	16	0	2,392	15	3
Farringdon .....	481	16	1	1,177	9	2	127	10	6	1,786	15	9
Honey Lane .....	27	6	0	130	11	0	5	4	6	163	2	3
Billingsgate .....	731	7	2½	656	5	0	1,064	15	6	2,452	7	8½
Smithfield Tolls .....	275	13	4	....	....	....	....	....	....	275	13	0
Allowance to Mr. Comp- troller for managing the Market Accounts)	....	....	....	....	....	....	....	....	....	150	0	0
										9,010	12	1½

	£	s.	d.
From City's Cash .....	8,955	6	5½
From other sources .....	55	5	8
	£9,010	12	1½

Extracted from City's Accounts and Returns from Mr. Comptroller, Collectors, &c.  
Chamberlain's Office.

B. W. SCOTT.

"The charge for taxes, &c.," states the Report of the Corporation Commissioners, "includes a sum paid to the Commissioners of Sewers for cleansing and lighting the markets. Billingsgate is lighted by the Corporation, where the gas must be turned on at a very early hour in the morning. Farringdon Market is the only one which is insured; that is done in consequence of the liability of the Corporation to Government for one-half of the profits. The salaries of the market officers are paid out of the proceeds, before they are paid over to the Chamber." (§ 340.) The fabrics of several of the markets labour under great disadvantages, and nearly all except Farringdon Market are very much confined, especially Leadenhall Market, which is so ill ventilated as to threaten the public health.

From the preceding account is expunged the item of £3,526 3s., paid by the public in fees to the oyster meters at Billingsgate, which had been entered by the City accountant, since this item has strictly no more connexion with the market than has the metage of corn with the exchange in Mark-lane, or that of fruit with the Farringdon Market. Were it retained it would present the absurdity of an expenditure of £4,168 9s. 6d. in the mere collection of only £3,472 13s. 8¼d.; while it is in reality only £642 6s. 6d. The sum collected by the oyster meters is on account of the metage dues upon all measurable articles brought by the Thames, levied originally to defray the expenses of providing standard measures, and seeing to their use between buyer and seller, in bargains made on the river or its banks; a duty in some degree analogous to the assay of weights and measures, and the enforcement of the use of just ones in the City at large.

The sum brought from the whole of the five provision markets in the City's cash, in the year 1833, was £18,013 18s. 4¾d., of which £3,472 13s. 8¼d. was derived from that of Billingsgate, a sum which

appears to include the dues of the "Cocket Office," which are fees supposed to be paid for the Mayor's permission to land certain articles, which, after deducting a per centage for collection, is paid over to the Mayor. The total expense of collecting the above is seen to have been £2,272 17s. 9d.; and the further cost of the markets in taxes, repairs, &c., £6,737 14s. 4½d., making a total of £9,010 12s. 1½d. Of this sum, nearly the whole, or £8,955 6s. 5½d. was paid out of the City's cash, to which the markets therefore yielded, in 1833, a net profit of £9,058 11s. 11¼d., less the small amount of cocket dues paid to the Mayor out of the Billingsgate account. On the Farringdon Market there was a loss of about £400, besides £520 14s. 9d., expended on account of the "Removal Fund" in that year, under the Act of the 5th George IV., for removing and rebuilding Fleet Market, now called Farringdon Market, viz., £374 15s. for erecting sheds, and £145 19s. 9d. for conveyancing expenses, insurance, &c.

The removal fund, by which the market was removed out of the space now forming Farringdon Street, into the new market-house on its north side, was a borrowed sum of no less than £150,000, to which £31,000 was afterwards added; and £110,000 of these sums had to be paid out of the city's revenue in 1833, its interest being in the meantime a further annual charge in addition to the preceding deficit.

The claim maintained by the Corporation of the city of London—the municipal government of one-tenth of the town—to a monopoly of markets, so far as they shall choose, for the whole of it, because the outlying portions of the metropolis occupy the formerly rural districts, over which its common law right of exclusive market extended, has been on successive occasions relinquished.

But in one particular it is still used to continue the infliction upon the whole metropolis of the dangerous and disgusting nuisance of the Smithfield Cattle Market. Beyond the interests of a few local tradesmen, the only ostensible ground for dragging into the centre of the metropolis the whole of the vast traffic in live cattle for the food of its inhabitants, is that the Corporation may secure its profit of £3,700 to £4,000 per annum from this source. To obtaining compensation for this, the Corporation would find not the least difficulty; but it would appear almost as though it were the nuisance itself, and not the public revenue, which they defend; for they did not hesitate to spend £6,997 15s. 3d., or two years' net income, in opposing the Islington Market Bill in 1834-5\*; or £29,665 4s. 1d. more, in enlarging the market, and thereby enlarging the nuisance, in 1836-8†, being a total sacrifice of about ten years' revenue, or half the whole value, rather than permit relief to the inhabitants of the metropolis from absolute danger in encountering the drovers with their goaded cattle, when they might have effectually secured, by an arrangement in Parliament, their own full revenue, and even the private vested interests in the nuisance. The legal claim of the Corporation to levy tolls as they do on the ground newly thrown into the market is exceedingly doubtful. Indeed, opinions have been given against it by their own officers.

Exclusive of this ground, there is but an area of less than four acres and a half, originally, as its name implies, an open field outside the

\* Common Council Minutes of 1836, p. 270.

† Common Council Minutes, 22nd Nov., 1838, p. 310.



town, but now inclosed in its very heart, and accessible on almost every side only through the narrowest and most constantly thronged streets in the metropolis. It is occupied partly by pens for sheep and pigs, and partly by open thoroughfares in which the cattle stand; and is surrounded by a wooden rail to which as many cattle as can stand or lie side by side are tied by the neck. But its entire area is often quite insufficient to accommodate the vast numbers of cattle which are seeking to press into it; and much of the time, even of the butchers themselves, is taken up in the market in providing for their personal safety. Four times the space would be required for the proper disposal of this vast amount of animal life without injury to itself, and consequently to the wholesomeness of the consumers' food; the wretchedness of the accommodation causing a rush to secure some portion of it, most injurious to the cattle themselves, and most disgusting to the public; commencing as it does in the after part of every Sunday in the year. The heat, filth, disorder, danger, and cruelty thus generated in the midst of the metropolis, sometimes baffle all description, and offer ample though unavailing employment for Societies for the Protection of Animals, the Suppression of Vice, and the Observance of the Sabbath\*. The cattle alone receive more injury in pecuniary value on the day they are taken to market, than during their whole journey to reach it; the total loss thus inflicted on the community being probably ten times the value of the City's net profit from the market. Did there exist in the metropolis even any such authority as a board of health, which should place this nuisance before the Legislature in its true light, there would be some hope of the resistance of the Common Council, advocating only the views and interests of the neighbouring publicans, being effectually overcome. In the middle of the last century, even, we find Smithfield Market denounced as having long been the monster nuisance of the town.

"The intolerable practice of holding a market for the sale of live cattle in the centre of the metropolis has been loudly and justly complained of for many years past, but no redress has yet been given, nor indeed any attention paid to the repeated remonstrances made against a nuisance at once extremely dangerous, as well as inelegant and inconvenient. The almost total inattention of the generality of mankind to everything which does not immediately concern their own interest, has hitherto prevented the citizens of London from taking cognizance of a nuisance which it is undoubtedly both their interest and duty to remove; the same inattention, or something worse, has likewise prevented them from considering that, with regard to this very circumstance, their forefathers were much wiser than their descendants; for they may please to recollect, that when London was a city, that is, had regular walls and gates, this very market was obliged to be kept in Smithfield, or the Smiths' Field, a field without the walls, near enough to the centre of the metropolis to render it convenient, but at the same properly situated to prevent those inconveniences which at this time are so justly complained of. At the same time we find that the slaughter-houses were situated in and about Butcher-hall Lane, between Newgate and Aldersgate, and probably nowhere else; which situation, from its vicinity to Smithfield, was extremely proper, and prevented the cattle from being driven through the streets of the city;

\* See the Evidence of the Rev. Daniel Wilson, now Bishop of Calcutta, and many others, before the Smithfield Market Committee of 1828. Sess. 1828, No. 551.

but as in succeeding times the suburbs began to be extended in a prodigious degree, Smithfield became not only surrounded with houses, but with streets also; and at length by the demolition of the city walls and gates, is become much too nearly situated in the heart of the metropolis; a circumstance which was manifestly never intended by our forefathers. It is a great pity therefore, that in regard to the lives and safeties of the people, as well as of elegance and decorum, this market is not removed to some convenient spot near the Islington Road; either between that road and the suburbs, or at the back part of Islington. This market might be formed into a regular and spacious square, surrounded with slaughter-houses and other necessary buildings adapted to the several purposes of this kind of business; and the whole might be so contrived as not to be offensive even in point of appearance; in such a place the beasts might be sold, and be killed by the purchasers, and afterwards removed to the several markets. . . . If such a scheme was to be put in execution, the removal of the market would give a fine opportunity to the city of London for converting Smithfield into a noble regular square, which might be applied either for the purpose of trade, or else as dwellings for merchants and people of opulence, as should be found most convenient\*."

Appended to a Report of a Committee for letting the City's Lands, delivered May 13th, 1796, is the "Substance of the Cutting Butchers' Petition and Allegations offered to the Right Hon. the Lord Mayor, Aldermen, and Common Council, for an alteration of one of the Smithfield markets from Friday to Thursday," in which it is stated—"First, that cattle killed immediately as they came from market, their flesh and fat are in a heated, fermented, and unsettled state, which renders the meat of them liable, in hot weather, to instant putrefaction, whereby cutting retail butchers suffer a great loss as a trading body; and every summer an incredible quantity of animal food is wholly lost to the public†." And they subsequently state that the cattle, sheep, and lambs "while in Smithfield are more agitated, as also the manner in which they are driven home, than they are in all the driving on the road preceding that time‡." In this state must the cattle necessarily be killed, while the slaughter-houses are in the town, to the great injury of the public health, even where actual putrefaction may not have occurred.

In 1808-9, a memorial signed by 177 landowners and graziers, 99 salesmen and butchers, and 30 inhabitants of Smithfield, and others, interested in the business transacted in Smithfield Market, was presented to the Lords of His Majesty's Privy Council for Trade, showing,—“That the ancient market-place at Smithfield is much too small to contain the live cattle necessary for the supply of the immensely-increased and increasing population of the metropolis and its environs;—that the cattle often bruise and lame, and sometimes trample upon and kill each other, by being confined for hours together in a crowded state in the market; and some of them are maimed or bruised in a shocking manner by the waggons, carts, or drays driven through Smithfield during market hours;—That the buyers cannot go between or among the beasts in their very crowded state at market, to examine them, without danger of sustaining serious bodily injury;—That the cattle

\* "London and Westminster Improved," by John Gwynn. 4to., London, 1766, pp. 18, 29, 20.

† Appendix to City Lands Committee's Report, p. 19.

‡ Ibid., p. 27.



sold in Smithfield exceed in value £5,000,000 per annum, and the loss sustained by the owners of the cattle from the above-mentioned causes, occasioned by the want of room in the market-place, is not less than £40,000 per annum;—That many representations have been made to the Corporation of London (as proprietors of the market) for redress, and the Corporation have caused several applications to be made to Parliament during the last six years for powers to enlarge the market-place, but no Act has passed for that purpose.” Further, that the plans proposed by the Corporation, but with no prospect of their accomplishment, for the enlargement of the area to six acres and a half, were wholly inadequate for the transaction of a rapidly-increasing business, which already demanded *not less than twelve acres* for its accommodation. This memorial was forwarded to the Lord Mayor by Lord Bathurst, President of the Board of Trade, with a letter stating that “some remedy must be applied, and the measure ought to originate from the City,” and recommending its removal to an entirely new area. A sub-committee of the City Lands Committee was accordingly appointed to investigate into the subject; they had various areas to the north of the town surveyed, but endeavoured by a deputation to urge upon the Board of Trade the propriety rather of enlarging the old market, representing the views of the neighbouring citizens, which are summed up in their final objection, that “another consequence of the removal will be the increase in value of the estates of ‘foreigners,’ (all subjects not citizens of London) while those of the citizens will be reduced in the same proportion. Should we not call that nation improvident which parted with several branches of its commerce? And yet this is exactly the case with the removal of the present market; for if the memorial presented to the Boards of Trade be correct, five millions of money is paid in the market yearly. Let the Corporation of London obtain whatever Acts of Parliament it may, the places contiguous to the market will receive the ready money of those who resort to it; and, instead of supporting the families and interests of the citizens of London, it will absolutely be taken from them to supply those who are considered by our charters as *aliens*. The injury which the *citizens of London* (*i. e.* the ‘City’) received by the loss of trade by the erection of the New Docks! is now become too apparent; a new town is arising about them, which will eventually take to itself a great part of the trade of the City: wherever the shipping interest is, a great portion of the trade of the town is carried; and nothing we can do will arrest it in its progress\*.”

But their Lordships of the Board of Trade, “after considerable discussion on the subject, distinctly stated that such enlargement would by no means afford the accommodation required, particularly in a place so much intersected with public streets and ways, and much less provide for such progressive increase of the business of the market as might reasonably be expected; and therefore it appeared to their Lordships that the removal of the market was necessary, to the nearest and most convenient situation, at which not less than twelve acres of uninterrupted space could be obtained. And their Lordships intimated that for such an important purpose it was probable that Parliament would grant powers to compel the owners and occupiers of

\* Appendix to Committee of City Lands Report, 2nd March, 1809, pp. 10, 11.

grounds eligibly situated, to sell the same at such prices as should be estimated by a jury in the usual manner. And their Lordships again stated, that they entertained no doubt but that the jurisdiction of the City would be extended to the site of such new market\*."

Influenced by this reasoning, the Select Committee resolved (and their resolutions were adopted by the Committee)—"That it is the opinion of this Committee that Smithfield Market ought to be removed;" and—"That it is the opinion of this Committee, that Lord Northampton's estate, called the Spa Field, containing about 16 acres, is the most eligible place to which Smithfield Market ought to be removed; either as regarding contiguity to the present site of Smithfield, or the natural and local situation of the Spa Field for the purposes of market."

But the moment that the efforts of Government were relaxed, all progress towards improvement ceased, and a renewed agitation on the part of the public in 1828, terminated only in rather a rambling report of a Commons' Committee, which, instead of giving some form and body to the public wants, referred the subject back again, expressly for continued contention, between the Corporation and the public. The Committee "trusted public attention would be seriously called to the subject, and that the Corporation of London would give every facility to the adoption of effectual remedies. Those remedies should embrace as well the removal of the nuisance of the market, and consequently driving of live stock through the streets, as to the improvement of the present system of slaughtering cattle; and adopted with due consideration of the rights of individuals, the convenience of the trade, and the welfare of the public, would confer a most important benefit on the inhabitants of this great and increasing metropolist."

The next serious attempt to break through the nuisance was made by an individual, Mr. John Perkins, who, seeing that the public interests and his own might be made to coincide, constructed a very extensive cattle market at Islington, near Ball's Pond; in 1835, procured an Act of Parliament establishing a market there (6 & 7 William IV., c. 68); and in 1836, endeavoured to procure another Act for abolishing Smithfield Market, on compensation being made to the Corporation. But the contest having now assumed the character of a personal struggle between two parties, each having interests very extensively involved, the Corporation, as the strongest, prevailed; and after his defeat, as it is the nature of the trade that all must go to one mart, Mr. Perkins offered the sale of his market to them, since they would not allow the transference of theirs to him. Petitions of graziers, salesmen, butchers, inhabitants, and others, were now poured in upon the Common Council, entreating the removal of the market‡, but their victory gave confidence to the narrow spirit from which this body can never wholly emancipate itself. Their prayer was denied; but the additions, already noticed, were made to the market, though without legal sanction, to stop the general outcry.

Nevertheless, these attempts to squeeze the live cattle market of the metropolis into Smithfield will ultimately fail as signally as the notable attempt to squeeze the metropolis itself into the City, after the great fire; for the inconveniences which still remain are unbearable

\* Sub-Committee's Report, p. 5.

† Second Report from Select Committee on the State of Smithfield Market, 1828. No. 551, p. 9.

‡ Common Council Minutes, 8th June, 1837, p. 157.



even to the dealers themselves; and so early as December (1842) a petition was presented to the Common Council by the sheep salesmen, for some further enlargement or alteration with regard to the market, which should give a sufficient accommodation to their stock\*.

The markets of Newgate and Leadenhall are likewise places disgraceful to any large city at the present day. They are in fact great slaughtering places as well as markets, in which the cattle are killed and flayed in dark, confined, and filthy cellars, in some of which from fifty to a hundred sheep together will be confined in the closest possible space, until the working butchers shall have successively dispatched the whole of them. The influences upon the public health from these sinks of garbage, precisely at the places to which so much of the population resort for traffic, will become obvious to any one who shall visit the localities, more by olfactory indications than by any evidence to the eyes in the thoroughfare, since the whole labour is performed under ground, in a space still more confined than that into which the business of these markets is itself with great inconvenience compressed. The whole of the slaughtering business ought to be expelled from the heart of the town, at whatever cost; and the market of Newgate might then, supposing the live cattle market also removed, occupy the fine space afforded by Smithfield, while that from which it was removed, would, with some small contiguous properties, present the means of accomplishing the much-desired enlargement of Newgate Gaol.

The Commons' Committee of 1828, stated that they would "rejoice at the establishment of slaughter-houses on an improved plan, which, by affording every facility to the butcher, might introduce a better system, and one to which those connected with the trade might be induced voluntarily to resort. Such establishments (for there should be, in their opinion, several in the environs of London) would well merit the patronage of the public, *to whose opinion, on such a subject, if strongly manifested, the butchers must yield, and from whose decision there could be no appeal*†." The light sense of legislative duty exhibited in thus referring it to the public to act for themselves, without conferring any municipal means of combined action, is not less remarkable than the total failure which necessarily accompanies each attempt to follow such advice. For instance, in 1838, the inhabitants of the eastern parts of the metropolis, not knowing how else to proceed, petitioned the Common Council for some relief from the inconvenience and danger to which they were exposed by the driving of cattle through Aldgate High Street, to the several slaughter-houses there and in the neighbourhood; but the next year they simply got the answer, that nothing could be done for them‡.

The markets in other parts of the metropolis, under various local Acts, besides the unsuccessful Islington Cattle Market above mentioned, are chiefly for vegetables and fruit, such as Covent Garden Market, the Borough Market, Hungerford Market, Portman Market, Fitzroy Market, Newport Market, Clare Market. Southwark, however, has also a skin market; and at Hungerford is a considerable fish market. There are likewise markets for provender in different parts of the town.

\* Common Council Minutes, 8th December, 1842.

† Commons' Committee's Report on Smithfield Market, Sess. 1828, No. 551, p. 6.

‡ Common Council Minutes, 18th July, 1839.

## MISCELLANEOUS.

## STATE OF THE PUBLIC HEALTH IN THE SECOND QUARTER OF THE YEAR 1847.

"THE Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty-six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,612,800 in 1841."

The returns of the last quarter indicate no improvement in the state of the public health: 51,585 deaths were registered; which is 6,745 above the average of the season.

The annexed Table shows that the mortality was below the average in the spring quarters of 1841, 1842, 1843, 1844, 1845, and 1846, and above the average in the spring quarters of 1839, 1840, but to nothing like the extent observed in 1847.

	1839	1840	1841	1842	1843	1844	1845	1846	1847
Deaths Registered in the June quarters of 9 years .....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,734	51,585
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1839 at the rate of 1.75 per cent. annually..	39,029	39,712	40,407	41,115	41,834	42,566	43,311	44,069	44,840
UNHEALTHY SEASONS Difference above the calculated number..	2,215	2,362	..	..	..	..	..	..	6,745
HEALTHY SEASONS. Difference below the calculated number..	..	..	1,274	2,546	1,491	3,589	2,464	335	..

The deaths in the quarter ending June 30th, have, in the last four years, been 38,997, 40,847, 43,734, and 51,585. The mortality showed a disposition to rise in the same quarter last year; and in the remarks appended to the returns, the necessity of active measures to avert the impending ravages of disease was insisted on, unfortunately without producing up to the present time any practical effect. The deaths, which in the four quarters ending June, 1846, were 36,153, 39,321, 43,850, and 43,734, became 51,427, 53,093, 56,105, and 51,585, in the four following quarters, which ended on the 30th of June last. Common cholera was fatal; scurvy prevailed more or less all over the country, from the want of vegetable food, the potato having failed; all food became scarce and dear; typhus broke out, is still epidemic, and shows no sign of decline. To add to the calamities of the country, the poor of Ireland, dying of starvation, and consumed by fever, were cast on the coast of England, and are now lodged in the crowded, filthiest parts of the most insalubrious cities, or in workhouses and hospitals provided by English parishes. The deaths in the twelve months, ending June 30th, were 212,210. The average of the seven preceding years was 165,831. Add 7.19 per cent. for increase of population, and the average applicable to 1847 is 177,700. The excess on the year was thus 34,000 deaths.

*Deaths Registered in the Quarters ending*

	1839-40	1840-41	1841-42	1842-43	1843-44	1844-45	1845-46	1846-47
September .....	37,317	39,498	36,058	39,409	36,953	38,933	36,153	51,427
December .....	41,740	44,186	39,292	39,662	42,607	44,081	39,321	53,093
March .....	46,376	46,967	44,903	43,748	46,136	49,949	43,850	56,105
June .....	42,074	39,133	38,569	40,343	38,977	40,847	43,734	51,585
Deaths in the year	167,507	169,781	158,822	163,162	164,673	173,810	163,058	212,210



These districts, however, including nearly all the towns of England, are always unhealthy in their natural state. The mortality is not more than 18 in 1000 in many districts and entire counties where the population is far from being in a favourable condition; and after every allowance has been made, if the ages of the inhabitants be taken into account, the mortality should certainly not exceed two per cent.; at which rate, as the population was about 7,274,900, the deaths in the year, June, 1846—47, would have been 145,498, or less by 32,200, than the average, 177,700. The excess of mortality in the twelvemonth ending June, 1847, tried by this standard, was 66,712! and that in only one-fourth part of the population of the United Kingdom.

That this insalubrity exists is incontestable; the causes of it are known; and that they admit of removal to a considerable extent is allowed by all who have paid attention to the subject. But it is a long time before the plainest principles can be carried out. When the works are commenced, it will be some years before they can be completed; and as yet nothing has been begun. After Captain Cook had demonstrated that the health of the Navy could be immeasurably improved, thousands of the best seamen had to perish—expeditions to be defeated—millions of pounds expended—thirty years to elapse before anything whatever effectual was done to place the health of the British Navy on a satisfactory footing. So it is to be feared that through the natural obstacles in the way, and the pertinacious opposition of parish vestries, of corporations, and companies, and the enemies of the public health, many times the number who have perished this year—many times 66,712 lives—will fall a sacrifice ere the towns of England enjoy, by the intervention of science, a moderate share of the health which nature confers on the country around them.

In London small-pox has been latterly prevalent; the deaths which were from 3 to 7 weekly in the beginning of the year, amounted at the close of June to 26 in the week. Typhus, which always prevails more or less, killed 58 persons in the last week of June; it was on the increase\*. Diarrhœa too was becoming more fatal as the temperature advanced. Purpura and hæmatemesis have both been unusually common. They are probably of the nature of scurvy.

The groundless prejudice against fruit, and the absolute necessity in diet of vegetables containing an acid, as the potato does, were dwelt on before scurvy and its kindred diseases made their appearance. It is true, that fruit when taken to excess produces symptoms, which may be mistaken by persons unacquainted with medicine for common cholera. But beef or mutton in excess will do the same; and the experience of this year has shown more clearly than had ever been shown before, that bread and meat alone are not sufficient to sustain the system in health. Fruit and acid vegetables are an essential part of the food of man; but it appears that the body when duly supplied with the principles it derives from these sources, husbands them up, and can do without the acid diet for some time. The appetite for fruit and pickles is not then without its use, although the chemists have not hitherto explained how vegetable acids subserve nutrition. Without these aliments the blood loses some of its essential properties, and escapes from the vessels in purple spots under the skin, or with more fatal effect into the structure of internal organs.

We may hope that no such cases as the following will occur again in any of the public institutions of the country.

“The mortality of this district (Maidstone, West) is about the average, except at the County Lunatic Asylum, where the deaths have amounted to 17, exactly the same number as were registered in that institution during the March quarter, while the average of the four quarters of 1846 was only 6½. The increase of mortality there is ascribed to the influence of the cold and inclement weather which prevailed during the early months of the year on the infirm and exhausted constitutions of the patients, who form the great proportion of its inmates. Added to which, the want of a due proportion of vegetables, especially potatoes, appears to have impaired their general health; this being manifested by the occurrence of numerous cases of scurvy in the month of March; none of which, however, proved fatal, as they all speedily recovered under a change of diet.”

\* Dr. Lynch, whose meritorious exertions in promoting the health of the city were referred to last quarter, has since fallen one of the victims of typhus.

It is painful to read the Registrar's melancholy accounts of the Irish poor, and of the towns on which they have been cast for support. I can only refer to these accounts drawn up without art, by eye witnesses.

The following description of the fever as it appears in Manchester, from Mr. Leigh, the Registrar of Deansgate, is interesting in a medical point of view.

"The fever is of an exceedingly low type, the subjects of it becoming typhoid, with a dry brown tongue, within a very few hours after the attack. In many, the brain is oppressed from the beginning, the pulse continuing slow (ranging from 70 to 80) throughout, the pupil being large, whilst in some there is great abdominal irritation, vomiting and diarrhoea ushering in the attack. This is followed by great tenderness over the abdomen, intolerance of pressure, and considerable distension from flatus. So far as my own observation has extended, and as far as I can gather from my professional friends, I think it may be stated generally that the mildest treatment has been the most successful. The present epidemic is essentially a famine fever, imported into this country by a class reduced to the lowest condition consistent with the carrying on of the vital processes. In such a state of the system, general derangement takes place, the body lives upon itself, furnishes its own materials for respiration, abnormal products are formed, partly retained and partly eliminated, producing disease in the system which forms them, and communicating it by the eliminated matters to others. Want compels the destitute to live together, whilst the deficiency of water, and the great personal uncleanness of the Irish poor gives to their sordid skin a morbid coating, and the tainted air they breathe carries its poison abroad, and the well-fed and the wealthy fall victims to the famine they felt not. A better supply of good food, a greater abundance of pure water, the separation of the poor from each other by removing them from the low lodging-houses in which they congregate often to the number of 18 or 20 in a single room, and the inculcation of greater cleanliness by the priesthood of all denominations, will, better than all mere medical treatment, subdue the fever which is now sweeping so many to the grave. The number of certified cases this quarter is considerable (211), still it leaves a large number (151) to have had no scientific or skilled assistance during the illness that has proved fatal to them. The medical officers of the Union and of the Children's Dispensaries complain that even in most of the certified cases the children were brought to them in a dying condition. To the apathy that prevails respecting their offspring, or to the marvellous confidence in unskilled advice which the poor so generally entertain, must this be attributed. They have a strange belief in intuitive knowledge. My friend, Dr. Howard, I may remark, has informed me that nearly all the cases of fever he has had in the Fever Hospital of this town, have been distinctly maculated."

A considerable number of medical men, as well as some clergymen and relieving officers, have fallen victims of typhus, caught in their attendance on the sick and dying, and in the discharge of their important public duties. The number of medical men who have died of typhus is yet unknown; the Registrar of Great Howard Street, Liverpool, says:

"Eight Roman Catholic priests have fallen victims to their indefatigable attentions to the poor of their Church, and one clergyman of the Church of England. Another (curate of St. Martin's) nearly fell a sacrifice to the same disease. Indeed, their exemplary conduct in visiting and relieving the sick has been the theme of praise with all. From 10 to 15 persons connected with the relieving department in the parish offices have also died of the fever, taken by them in discharge of their duties."

The members of the medical profession, with the exception of the visiting clergy and a few others, stand alone in the circumstance that they discharge their duty at the risk of life. The heroic conduct of those now alive, and of those who have perished, will, we may hope, not be forgotten by their country.



## MORTALITY OF THE COUNTRY.

*Quarterly Table of the Mortality in 117 of the Districts of England (including the Principal Towns), showing the Number of Deaths Registered in the Quarters ending June of the Four Years 1844-45-46-47.*

Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending June 30th.			
		Years.			
		1844.	1845.	1846.	1847.
<i>Metropolis*.</i>					
West Districts..	301,326	1,802	1,843	1,694	1,724
North Districts..	376,396	2,231	2,177	2,231	2,424
Central Districts..	374,759	2,044	2,056	2,032	2,164
East Districts ..	393,247	2,433	2,389	2,372	2,651
South Districts..	502,483	3,087	2,959	3,094	3,398
Total †.....	1,948,211	11,597	11,424	11,423	12,361
<i>South Eastern Division.</i>					
Maidstone.....	32,310	202	173	165	212
Brighton.....	46,742	217	218	302	282
Isle of Wight ..	42,547	191	194	174	198
Portsea Island ..	53,036	363	301	375	426
Winchester ..	23,044	116	139	125	130
Windsor.....	20,502	97	96	96	115
Total .....	218,181	1,186	1,121	1,237	1,363
<i>South Midland Division.</i>					
St. Albans .....	17,051	67	83	76	94
Wycombe .....	34,150	229	192	129	185
Oxford.....	19,701	77	86	111	80
Northampton ..	28,103	224	251	156	176
Bedford .....	31,767	198	180	158	231
Cambridge ....	24,453	155	147	125	195
Total .....	155,225	945	939	755	961
<i>Eastern Division.</i>					
Colchester.....	17,790	105	126	100	129
Ipswich.....	25,254	161	178	171	149
Norwich.....	61,846	343	406	437	355
Yarmouth.....	24,031	127	191	133	100
Total .....	128,921	736	901	841	733
<i>South Western Division.</i>					
Devizes .....	22,130	118	108	123	139
Dorchester.....	23,380	95	135	108	123
Exeter .....	31,333	186	164	181	187
St. Thomas ....	47,105	220	231	195	205
Plymouth .....	36,527	209	225	184	191
Redruth .....	48,062	244	214	201	235
Penzance .....	50,100	221	204	208	240
Bath.....	69,232	433	415	393	417
Total .....	327,869	1,726	1,696	1,593	1,737
<i>Western Division.</i>					
Bristol.....	64,298	424	419	379	400
Clifton.....	66,233	427	375	338	369
Stroud .....	38,920	245	203	182	192
Cheltenham ....	40,221	191	199	177	216
Hereford.....	34,427	207	168	187	208
Shrewsbury ....	21,529	139	118	132	158
Worcester .....	27,130	129	150	139	196
Kidderminster..	29,408	169	279	131	196
Dudley.....	86,028	468	551	596	691
Walsall .....	34,274	174	180	220	252
Wolverhampton ..	80,722	457	541	500	847
Wolstanton ....	32,669	201	228	243	344
Birmingham.....	138,187	871	858	842	1,263
Aston .....	50,928	298	292	269	320
Coventry.....	31,028	199	187	164	192
Total .....	776,002	4,599	4,748	4,499	5,844
<i>North Midland Division.</i>					
Leicester .....	50,932	332	432	305	329
Lincoln .....	36,110	180	202	205	211
Nottingham.....	53,080	325	322	310	494
Basford.....	59,634	358	351	339	384
Derby .....	35,015	209	206	209	223
Total .....	234,771	1,404	1,513	1,368	1,551
<i>North Western Division.</i>					
Stockport.....	85,672	418	516	621	632
Macclesfield ..	56,018	336	362	438	509
Great Brough- ton (including Chester).....	49,085	236	291	312	322
Liverpool.....	223,054	1,547	1,611	2,098	4,809
West Derby (adjoining Liverpool) ..	88,652	524	584	828	987
Blackburn .....	75,091	460	525	638	642
Preston.....	77,189	463	481	587	627
Rochdale .....	60,577	407	466	475	464
Bury .....	77,496	495	436	531	626
Bolton .....	97,519	616	643	689	812
Wigan .....	66,032	486	358	654	668
Prescott .....	43,739	197	234	284	474
Chorlton .....	93,736	540	647	705	757
Manchester....	192,408	1,257	1,324	1,611	2,362
Salford .....	70,228	417	445	539	509
Ashton .....	173,964	992	1,382	1,460	1,492
Total .....	1,530,460	9,391	10,305	12,470	16,692
<i>York Division.</i>					
Sheffield .....	85,076	464	513	852	636
Huddersfield ..	107,140	572	603	731	793
Halifax .....	109,175	606	627	807	727
Bradford .....	132,164	962	1,106	1,208	1,109
Leeds & Hunslett	168,667	936	1,177	1,087	1,492
Hull .....	411,130	229	258	336	301
York .....	47,779	267	296	293	369
Total .....	691,131	4,036	4,580	5,314	5,427
<i>Northern Division</i>					
Sunderland ....	56,226	307	303	452	369
Gateshead ....	38,747	216	237	283	289
Tynemouth .....	55,625	256	293	423	398
Newcastle-on- Tyne.....	71,850	383	429	597	606
Carlisle .....	36,084	197	203	241	433
Cockermouth ..	35,676	166	174	218	288
Kendal .....	34,694	187	184	212	256
Total .....	328,902	1,712	1,823	2,426	2,639
<i>Welsh Division.</i>					
Abergavenny ..	50,834	332	352	358	535
Pontypool .....	25,037	99	150	211	213
Merthyr Tydvil ..	52,864	560	461	438	585
Newtown .....	25,958	117	149	132	181
Wrexham.....	39,542	219	214	244	263
Holywell .....	40,787	208	286	220	267
Anglesey .....	33,105	110	191	205	233
Total .....	273,127	1,645	1,797	1,808	2,277
Ditto, exclu- sive of the Metropolis }	4,664,589	27,380	29,423	32,311	39,224
Grand Total..	6,612,800	38,977	40,847	43,734	51,585

\* The mortality of the districts of Wandsworth and Lewisham, and sub-district of Hampstead, is included in the above table, in each of the four years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

† The last quarter in London ended June 26, 1847.

‡ The former District of Leeds is now divided into the districts of *Leeds* and *Hunslett*, both included in the present return.

## MORTALITY OF THE METROPOLIS.

*A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending June of the Four Years, 1844-45-46-47.*

CAUSES OF DEATH.	Quarters ending June*.				CAUSES OF DEATH.	Quarters ending June*.			
	1844.	1845.	1846.	1847.		1844.	1845.	1846.	1847.
ALL CAUSES.....	11,471	11,267	11,271	12,361	III. Cephalitis.....	153	144	147	173
SPECIFIED CAUSES.....	11,432	11,231	11,235	12,331	Hydrocephalus....	497	456	443	407
I. Zymotic (or Epi- demic, Endemic, and Contagious) Diseases.....	2,451	1,885	1,787	2,112	Apoplexy.....	294	252	329	317
SPORADIC DISEASES.					Paralysis.....	213	191	246	255
II. Dropsy, Cancer, and other Diseases of uncertain or va- riable Seat.....	1,209	1,193	1,166	1,315	Convulsions.....	614	641	514	526
III. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	2,006	1,938	1,987	1,997	Tetanus.....	7	7	5	3
IV. Diseases of the Lungs and of the other Organs of Respiration.....	3,229	3,478	3,487	3,726	Chorea.....	2	3	1	1
V. Diseases of the Heart and Blood Vessels	378	419	405	515	Epilepsy.....	55	49	90	101
VI. Diseases of the Sto- mach, Liver, and other Organs of Digestion.....	847	860	1,012	1,067	Insanity.....	18	16	29	31
VII. Diseases of the Kid- neys, &c.....	94	125	133	151	Delirium Tremens..	29	23	33	35
VIII. Childbirth, Diseases of the Uterus, &c.	99	150	158	177	Disease of Brain, } &c.....	124	156	150	148
IX. Rheumatism, Dis- eases of the Bones, Joints, &c.....	82	85	134	161	IV. Laryngitis.....	17	12	28	47
X. Diseases of the Skin, Cellular Tissue, &c.....	12	25	32	51	Quinsey.....	23	14	16	20
XI. Old Age.....	673	744	491	664	Bronchitis.....	194	272	510	710
XII. Violence, Privation, and Intemperance	352	329	443	395	Pleurisy.....	19	28	40	67
I. Small Pox.....	425	246	87	181	Pneumonia.....	715	869	705	748
Measles.....	208	322	163	277	Hydrothorax.....	67	54	47	50
Scarlatina.....	601	201	177	174	Asthma.....	161	203	150	201
Whooping Cough....	361	463	545	392	Phthisis or Con- } sumption.....	1,838	1,819	1,850	1,733
Croup.....	126	83	67	50	Disease of Lungs, &c	195	207	141	150
Thrush.....	42	45	40	35	Pericarditis.....	29	29	20	34
Diarrhœa.....	83	84	153	202	Aneurism.....	14	11	11	15
Dysentery.....	18	17	18	39	Disease of Heart, &c.	335	379	374	466
Cholera.....	9	2	9	4	Teething.....	165	163	114	120
Influenza.....	28	11	21	23	Gastritis.....	11	19	20	30
Ague.....	3	3	8	11	Enteritis.....	169	143	106	106
Remittent Fever....	4	7	27	16	Peritonitis.....	29	37	54	66
Typhus.....	455	308	364	563	Tabes Mesenterica..	125	128	202	227
Erysipelas.....	68	80	78	107	Worms.....	6	4	22	10
Syphilis.....	19	13	30	33	Ascites.....	17	14	24	23
Hydrophobia.....	1	..	..	..	Ulceration (of In- } testines, &c.)..	9	32	40	23
II. Inflammation.....	7	..	..	..	Hernia.....	23	25	28	45
Hæmorrhage.....	42	28	30	32	Colic or Ileus.....	32	31	39	37
Dropsy.....	333	329	125	166	Intussusception....	7	11	18	22
Abscess.....	20	15	16	11	Stricture.....	3	6	11	7
Noma.....	..	1	2	1	Hæmatemesis.....	10	11	16	20
Mortification.....	46	60	34	29	Disease of Sto- } mach, &c.....	74	65	82	85
Purpura.....	3	4	9	25	Disease of Pancreas	1	1	1	..
Scrofula.....	43	41	77	73	Hepatitis.....	22	24	48	55
Cancer.....	170	151	191	193	Jaundice.....	39	27	30	36
Tumour.....	7	2	..	4	Disease of Liver, &c.	105	117	154	155
Gout.....	19	15	16	14	Disease of Spleen..	..	2	3	..
Atrophy.....	137	136	235	291	VII. Nephritis.....	9	4	11	7
Debility.....	236	242	255	286	Ischuria.....	..	..	2	2
Malformations.....	22	17	47	40	Diabetes.....	3	7	9	7
Sudden Deaths†....	124	152	129	150	Cystitis.....	2	5	11	7
					Stone.....	5	10	7	13
					Stricture.....	16	12	8	11
					Disease of Kidneys, } &c.....	59	87	85	104
					VIII. Childbirth.....	67	104	102	102
					Paramenia.....	3	1	4	4
					Ovarian Dropsy.....	6	8	15	20
					Disease of Uterus, } &c.....	23	37	37	51
					IX. Arthritis.....	1	2	2	4
					Rheumatism.....	27	31	79	84
					Disease of Joints, } &c.....	54	52	53	73
					X. Carbuncle.....	..	3	..	3
					Phlegmon.....	2	2	6	7
					Ulcer.....	7	4	12	24
					Fistula.....	1	5	5	5
					Disease of Skin, &c.	2	11	9	12
					XI. Old Age.....	673	744	491	664
					XII. Intemperance....	13	15	20	13
					Privation.....	6	3	6	12
					Violent Deaths....	333	311	417	370
					Causes not specified	39	36	36	30

\* The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the Quarters ending June they were respectively (1840) 171; (1841) 172; (1842) 128; (1843) 127; (1844) 126; (1845) 157; (1846) 152.

† Under the head of "sudden deaths" are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.



PRICES OF

*Average Contract Prices of the Provisions and Fuel supplied to the Workhouses*

Districts marked out by the Registrar-General, and Central Unions contained therein.	Average Weekly Cost per Head of In-door Paupers.			Wheat Flour per Stone.	Wheat Bread per 4 lbs.	Meat—Pork, Beef, and Mutton per lb.	Salt Butter per lb.	Cheese per lb.	Potatoes.
	Food.	Clothing.	Food and Clothing.						
<i>Metropolis.</i>	<i>s. d.</i>	<i>d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>s. d.</i>
East London .....	2 7½	3½	2 11	1 10¾	6	6½	8¼	....	4 0 cwt.
Holborn .....	2 2½	2¾	2 5¼	2 4	6	5½	6¾	4½	3 6 cwt.
<i>South Eastern Counties.</i>									
Maidstone .....	2 7½	3½	2 11	2 0½	6	4¼	8½	5	5 0 cwt.
South Stoneham .....	3 0¾	3½	3 4¼	2 4	7	{ 7¾ 7¼ }	9	6	2 6 cwt.
<i>South Midland Counties.</i>									
Northampton .....	2 11	5¼	3 4¼	2 1	5	5½	12	6½	....
Cambridge .....	2 7½	5¼	3 0¾	2 3	6	5¼	10	5	Various.
<i>Eastern Counties.</i>									
Ipswich .....	2 4	7	2 11	1 10½	6	6	8¾	5	9 0 sack.
<i>South Western Counties.</i>									
Devizes .....	2 0½	3½	2 4	1 10½	5	4	....	3¾	....
Penzance .....	2 1¾	2½	2 4¼	2 2	{ 6 5 }	{ 6 5½ }	10½	10	5 0 cwt.
Bath .....	2 2	2	2 4	1 10¾	5	....	9½	4	10 0 sack.
<i>Western Counties.</i>									
Gloucester .....	2 5¾	1¾	2 7½	1 10¾	5¼	4¾	12	5¼	7 6 sack.
Wolverhampton .....	2 11½	2¾	3 2¼	2 0½	6	5¼	10½	6	7 2½ bag.
<i>North Midland Counties.</i>									
Derby .....	1 10½	7	2 5½	1 11	5½	{ 5¼ 4½ }	13	6	3 0 cwt.
<i>North Western Counties.</i>									
Macclesfield .....	2 4	....	2 4	2 0½	....	5½	14	6½	6 7½ load.
Bolton .....	1 8¾	½	1 9¼	2 0½	6¼	5¾	8	6½	11 0 load.
Prescot .....	2 0½	3½	2 4	....	6	5	10	....	3 0 bushel.
<i>North Eastern Counties.</i>									
Sheffield .....	2 6¾	4	2 10¾	1 10½	....	5	....	7½	{ 0 11 0 8 } peck.
Huddersfield .....	2 5¾	2¼	2 8	2 0	....	6¼	12	8	10 0 pack.
Sculcoates .....	2 7½	12¼	3 7¾	1 9	6	4¾	13	....	0 8 peck.
<i>Northern Counties.</i>									
Gateshead .....	2 0	5¼	2 5¼	2 2	5¼	5¼	11	6½	4 8 cwt.
Kendal .....	2 5¾	3½	2 9¼	2 5½	....	4	11¼	6	0 7 stone.
<i>Wales.</i>									
Pembroke .....	1 10¾	3½	2 2¼	2 4	....	{ 6½ 5½ }	10	4	....
St. Asaph .....	2 2¼	5¼	2 7½	1 10¾	6	4½	11	....	7 6 hob.

## PROVISIONS, FUEL, &amp;c.

of the following Unions, during the Quarter ending at Michaelmas, 1846.

Peas per Quart.	Oatmeal per lb.	Candles per 12 lbs.		Yellow Soap.		Coals per Ton.		Tea per lb.	Sugar per lb.	Milk per Quart.	Miscellaneous Articles.
<i>d.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>d.</i>	
3 2 $\frac{3}{4}$	1 $\frac{1}{2}$ 1 $\frac{3}{4}$	4	10 $\frac{1}{2}$ 5 0	36 6 cwt. 41 0 cwt.		17 6 16 11		3 2 $\frac{1}{2}$ 3 4	5 $\frac{1}{4}$ 5	2 ....	Table Beer, 5 <i>s.</i> Barrel. Porter, 33 <i>s.</i> Barrel.
....	....	5	0	43 0 cwt.		20 9		3 4	5 $\frac{1}{2}$	1 $\frac{1}{2}$	
4 $\frac{1}{2}$	2 $\frac{1}{2}$	5	4	0 5 lb.		20 0		3 3	5 $\frac{1}{2}$	1	Rice, 3 <i>d.</i> Salt, $\frac{1}{4}$ <i>d.</i> Pepper, 1 <i>s.</i> lb. Beer, 6 <i>d.</i> gal., Wood, 12 <i>s.</i> per 100 bavins, Starch, 4 $\frac{1}{2}$ <i>d.</i> Gin, 10 <i>s.</i> gal.
3 $\frac{1}{4}$ 2 $\frac{1}{4}$	.... 1 $\frac{1}{2}$	5	0 5 3	49 0 cwt. 43 0 cwt.		16 9 20 0		3 6 3 6	5 5	1 $\frac{3}{4}$ ....	Rice, 24 <i>s.</i> cwt. Soda, 9 <i>s.</i> cwt. Suet, 4 <i>s.</i> stone. Rice, 2 $\frac{1}{4}$ <i>d.</i> lb.
2 $\frac{1}{2}$	2 $\frac{1}{4}$	4	6	42 0 cwt.		18 3		....	....	....	
2 $\frac{1}{2}$	2 $\frac{1}{4}$	5	3	0 5 $\frac{1}{2}$ lb.		20 0		3 0	5 $\frac{1}{2}$	....	Beer, 7 <i>d.</i> gallon.
2 $\frac{1}{4}$	2	5	0	46 0 cwt.		17 0		3 4	5 $\frac{3}{4}$	....	Fish, 7 <i>s.</i> cwt.
2 $\frac{3}{4}$	2 $\frac{1}{4}$	5	0	39 0 cwt.		13 2		3 3	5 $\frac{1}{4}$	....	Rice, 20 <i>s.</i> cwt.
2 $\frac{1}{4}$	1 $\frac{3}{4}$	5	0	36 0 cwt.		{13 0} {15 0}		3 4	5 $\frac{1}{2}$	....	Bacon, 6 $\frac{1}{4}$ <i>d.</i> lb.
2 $\frac{1}{2}$	1 $\frac{1}{2}$	5	0	0 4 $\frac{1}{2}$ lb.		10 6		3 6	5 $\frac{1}{2}$	1	Rice, 2 <i>d.</i> lb. Soft Soap, 20 <i>s.</i> per 64 lbs.
3	2 $\frac{1}{2}$	5	6	41 0 cwt.		8 6		4 0	6	....	Rice, 21 <i>s.</i> cwt.
2 $\frac{1}{2}$ 2 $\frac{1}{2}$ 3 $\frac{1}{2}$	2 $\frac{1}{4}$ 2 $\frac{1}{4}$ 2 $\frac{1}{4}$	5 .... 4 10	0 5 $\frac{1}{4}$ lb. 10	0 4 lb. 0 5 $\frac{1}{4}$ lb. 50 0 cwt.		10 9 8 4 8 6		.... .... ....	.... .... ....	.... 1 1 $\frac{1}{2}$	Treacle, 2 $\frac{3}{4}$ <i>d.</i> Bacon, 5 <i>d.</i>
....	1 $\frac{3}{4}$	5	0	46 0 cwt.		{0 3 $\frac{1}{4}$ cwt.}		{5 8} {3 4}	5 $\frac{3}{4}$	2	Rice, 4 <i>s.</i> 3 <i>d.</i> stn. Salt, 2 $\frac{1}{4}$ <i>d.</i> stn.
3 $\frac{3}{4}$	1 $\frac{1}{2}$	5	6	0 5 $\frac{1}{2}$ lb.		7 0		....	....	....	Treacle, 13 <i>s.</i> 6 <i>d.</i> Coffee, 1 <i>s.</i> 6 <i>d.</i>
....	2 $\frac{1}{2}$	6	0	5 9 stone		15 0		....	....	1	
2 $\frac{1}{2}$	1 $\frac{3}{4}$	5	6	41 0 cwt.		11 6 chaldron.		3 10	5 $\frac{1}{4}$	....	Coffee, 1 <i>s.</i> 3 <i>d.</i> lb.
2 $\frac{1}{2}$	1 $\frac{3}{4}$	5	2	0 4 $\frac{1}{4}$ lb.		0 8 $\frac{1}{2}$ cwt.		3 9	6	1	Rice, 2 $\frac{1}{4}$ <i>d.</i> lb. Coffee, 1 <i>s.</i> 4 <i>d.</i> lb. Treacle, 2 $\frac{1}{2}$ <i>d.</i>
2 $\frac{1}{2}$	....	5	9	47 0 cwt.		15 10		....	6	1	Barley Meal, 10 <i>s.</i> cwt. Rice, 3 <i>d.</i>
4 $\frac{1}{2}$	1 $\frac{1}{2}$	5	6	0 4 $\frac{3}{4}$ lb.		14 0		3 6	6	2	Rice, 2 <i>d.</i> lb.



QUARTERLY METEOROLOGICAL TABLE,  
Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

1847 Weeks ending	Phases of the Moon.	THERMOMETERS.										WIND.				Mean amount of Cloud, 0-10.	Rain in inches [7 days.]	Deaths at Three Ages, exclusive of violent and sudden Deaths			Deaths from all causes, exclusive of violent and sudden Deaths.			
		Mean.			Dew Point.	Self-Registering.			Difference between the temperature and air temperature.			Pressure in lbs. on the square foot.		The amount of Horizontal movement of the air in each week.	miles			0 to 15.	15 to 60.	60 and upwards.				
		Mean.			Mean of 72 observations weekly.	Of the Highest on each day, from 6 observations.	Of the Lowest on each day, from 6 observations.	Difference.	Mean of 72 results.	During the week.	Mean of 7 observations.	Lowest on the Grass.	Highest in the Sun.									General Direction.	Greatest pressure in the week.	Mean for the week.
		Highest during the week.	Lowest during the week.	Of the Highest on each day, from 6 observations.																				
Mean height of the Barometer from 72 observations, corrected and reduced to 32 degrees Fahrenheit.		inches									°	°	°	°	°	°	°	°	°	°	°	°		
April	3 Full, Mar. 31st..	29.101	44.4	28.0	43.1	31.2	11.9	36.8	30.7	67.0	58.5	16.8	22.3	45.1	45.1	1.8	7.0	7.4	0.55	355	326	230	912	
"	10 Last qr., April 18th	29.618	57.6	39.4	54.1	42.5	11.6	47.9	39.0	73.0	64.9	29.0	32.8	44.9	44.5	2.2	2.1	6.9	0.13	420	349	244	1013	
"	17 New, 15th .....	22.744	61.0	24.3	50.8	35.4	15.4	42.6	35.0	82.0	67.8	14.5	27.3	46.8	45.9	2.0	3.6	7.9	0.32	360	343	250	954	
"	24 1st quarter, 22nd	29.816	58.0	31.8	55.7	35.7	20.0	45.5	36.7	87.0	79.8	19.0	24.1	47.5	47.0	2.1	2.1	4.8	0.00	355	355	242	952	
May	1 Full, April 30th	29.569	59.5	37.0	56.4	42.0	14.4	48.1	40.6	80.0	74.1	26.0	33.8	50.4	49.5	1.6	1.2	7.7	0.54	369	358	234	962	
"	8 Last qr., May 7th	29.504	62.5	37.7	55.6	42.9	12.7	49.1	43.4	80.0	72.6	28.0	34.4	51.3	50.9	0.9	4.2	8.2	0.54	413	328	226	967	
"	15 New, 14th .....	29.605	68.0	45.1	63.8	48.3	15.5	56.1	49.5	97.3	84.2	32.0	39.6	56.2	54.9	0.8	4.6	6.8	0.54	379	338	224	941	
"	22 1st quarter, 22nd	29.836	73.3	48.5	67.2	50.0	17.2	58.4	49.9	99.0	86.4	35.7	40.5	59.4	58.3	2.8	3.9	6.2	0.14	400	272	201	373	
"	29 "	29.894	85.3	43.5	74.8	50.3	24.5	63.4	52.3	111.0	99.0	29.2	39.9	65.4	62.4	1.7	8.9	3.5	0.21	412	314	192	918	
June	5 "	30.223	79.2	49.0	76.6	50.7	25.9	62.3	50.8	114.8	100.2	33.5	38.7	70.0	65.4	2.6	5.1	3.5	0.00	323	286	142	752	
"	12 "	29.769	67.0	43.0	63.1	45.7	17.4	54.4	44.7	89.0	82.5	28.0	35.9	66.1	62.3	2.1	4.2	6.7	0.43	341	290	178	811	
"	19 "	29.525	66.6	47.4	61.4	50.3	11.1	56.0	50.5	88.5	77.2	38.9	41.5	63.6	60.5	0.9	4.3	8.2	0.94	386	336	181	903	
"	26 "	29.620	69.8	46.0	65.3	50.5	14.8	57.8	50.7	92.0	82.0	34.5	43.1	63.9	60.4	1.2	2.7	7.9	0.25	391	309	175	883	
Mean, Highest, or Lowest of the 13 weeks.		29.713	85.3	24.3	60.6	44.3	16.3	52.2	44.1	114.8	79.2	14.5	34.9	56.2	54.3	1.7	0.4	6.6	4.59	4901	4204	2719	11841	

\* Mean of seven weeks.

† Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, not when they occur, but at uncertain periods; and they are, therefore, excluded from this comparison of weeks.

+ The ages of 14 were not specified in the Returns.

REMARKS ON THE WEATHER DURING THE QUARTER ENDING  
JUNE 30th, 1847.By JAMES GLAISHER, Esq., *of the Royal Observatory, Greenwich.*

THE cold weather which prevailed during the whole of the preceding quarter continued with slight exceptions, till the end of the first week in May. On the 9th of this month a period of warm weather set in, and from that day till June 7th, the daily mean temperature at Greenwich exceeded that of the average for the season by  $5^{\circ}6$ ; and it was less than the average on every day from June 7th till the end of the quarter.

The weather during the period from May 9th to June 7th was very remarkable on account of its great heat, and particularly so on Sunday, May 23rd, and on Friday, May 28th. On these days the temperature at Greenwich rose higher than any on record, as occurring in the month of May, and from the numbers in the subjoined Table such appears to have been the case at all parts of the country situated south of the latitude of  $54^{\circ}$ , except at those places situated in the vicinity of the sea, where the highest readings of the thermometer were from  $69^{\circ}$  to  $74^{\circ}$ , whilst at all other places the readings were between  $80^{\circ}$  and  $87^{\circ}$ . I believe there is no example on record of such high readings in the month of May.

The mean temperature of the quarter at Greenwich was  $53^{\circ}2$ , which is  $2^{\circ}0$  below that of the corresponding quarter of 1846;  $1^{\circ}3$  above that of 1845;  $1^{\circ}8$  below that of 1844; and  $0^{\circ}2$  above that of the quarter for twenty-five years.

The approximate mean monthly temperatures for other places are shown in the subjoined Table, and they differ but little in each month, from those of Greenwich, at all places south of Durham excepting those situated in the counties of Cornwall and Devonshire. The influence of height, however, is clearly indicated, in lowering the temperature, as at Beckington in Somersetshire, whose height above the level of the sea is estimated at 265 feet; and also that of the neighbourhood of the sea, as at Brighton, Liverpool, and Whitehaven. The north latitude of the last place, however, may also have had some effect in the depression of the temperature.

The monthly mean temperatures of those places in Cornwall and Devonshire in April were above; in May nearly the same, and in June were below those of other places.

This alleviation of the winter's cold, and lowering of the summer's heat in these counties are easily accounted for. In winter when the air was colder than the water, it took a portion of heat from the surface of the water, which being cooled by being thus brought into contact with the cold air, sank and made room for the warmer portions beneath, whilst the heated air rose and flowed over the land. In summer when the air is warmer than the water, much heat becomes latent by the quick evaporation of the water. The water changed in vapour, and mixed with the air as an elastic fluid, passes inland and takes a share in the total pressure of the atmosphere, and is of the utmost importance with reference to barometrical variations.

The pressure of the atmosphere at Greenwich was less than that in the corresponding quarter of the three preceding years.

On first casting our eyes to the column of reduced barometer readings in the subjoined Table, we find but little difference between the numbers at each station. The numbers in May and June are greater than those in April, for all places, except Helston, notwithstanding the temperature of April was much below that of either May or June. In turning our attention the numbers in the same column at the same places in the preceding quarter, we still find the differences small between the numbers month by month from January to June, the numbers at the following month being sometimes larger and sometimes smaller than at the preceding month.

As the temperature increases, the air increases in volume, and consequently ascends, and flows off laterally above, over those places where the temperature is



less and the air diminishing in volume. Hence the statical pressure of the column is diminished. On the other hand, as the temperature increases, the evaporation increases, and therefore the mass of water mixed with the air is augmented. Those two changes, occurring at the same time, but acting in opposite directions, have caused the annual variation of the volume of air to be completely masked in the barometer readings, including as they do the variations of vapour pressure. The readings of the barometer as contained in the subjoined Table, represent the height of the mercurial column caused by the joint pressure of the dry air, and the aqueous vapour mixed with it. One part of this column, therefore, is supported by the dry air, the other by the vapour; and it certainly is curious to see how very nearly the loss of weight of one by the influence of heat, is balanced by the increased weight of the other, proceeding from the same cause, so that it is evident we cannot say whether an increase of heat will cause the sums of the pressures of dry air and vapour (commonly called the pressure of the atmosphere) to be augmented or diminished, or in other words, whether the preponderance of weight may be on the side of the water or on that of the air. It is, therefore, evident that to render barometrical observations of value, a separation of the variation of the vapour-atmosphere becomes indispensable in any researches upon the variations (either diurnal or annual) of the atmospheric pressure, and this can be done only by cotemporaneous observations of the barometer, and the dry and wet-bulb thermometers, or instead of the two latter, of Daniell's hygrometer, and these instruments should all be of the best kind.

It is a matter of regret that there are so many omissions of simultaneous observations of these instruments in the subjoined Tables, and also that where such have been made, that so few of the instruments have been compared with standard instruments; these circumstances prevent me from speaking of the results other than in a general sense, or as approximations to truth.

From the numbers, in the following Table, under the head of "Elastic Force of Vapour," it will be seen that the tension of vapour in April was such as to balance more than a quarter of an inch of the mercurial column, and that in May and June, it was little short of four-tenths of an inch.

By turning our attention to the numbers in the next column, in connexion with those obtained in the preceding quarter, the diminution of the volume of air consequent on the increase of temperature is clearly indicated.

The temperature of the dew point at Greenwich was  $44^{\circ}$ , being lower than in the Spring of 1844, 1845, or 1846 by  $3^{\circ}1$ ;  $2^{\circ}4$ ; and  $4^{\circ}2$  respectively.

The degree of humidity of the atmosphere at Greenwich was  $0\cdot765$ , being much less than that of the corresponding quarters of the three preceding years. The sky was rather more clouded than in either of the three preceding years.

The horizontal movement of the air, as deduced from observations, spread over the first five weeks and the last two weeks of the quarter, was 849 miles weekly, being about the average amount.

The temperature of the Thames water was  $56^{\circ}2$  by day, and  $54^{\circ}3$  by night. The water was on an average  $2^{\circ}0$  warmer than the air.

The highest and lowest readings of the thermometer in air at the height of four feet above the ground, and protected as much as possible from radiation, were  $85^{\circ}3$  and  $24^{\circ}3$ , as taken from two-hourly observations; those readings, therefore, are not the true maximum and minimum, unless such happened at one of the hours of observation.

The highest readings of the thermometer whose bulb was placed in the full rays of the sun, and protected from lateral wind striking it, was  $114^{\circ}8$ ; the highest reading of a thermometer placed on grass was  $150^{\circ}$ —, and the lowest was  $14^{\circ}5$ ; the lowest on flax grass was  $8^{\circ}3$ .

In April the reading of the thermometer on grass was below  $20^{\circ}$  on four nights; between  $20^{\circ}$  and  $30^{\circ}$  on fifteen nights, and at  $32^{\circ}$  on two nights. In May it was at and below  $32^{\circ}$  on seven nights. In June it was below  $32^{\circ}$  on two nights; and between  $32^{\circ}$  and  $40^{\circ}$  on ten nights. Vegetation during the month of April was subjected to frequent low temperatures, and to this time was very backward. From May 9th the temperatures at night were seldom low, and the progress of vegetation was very rapid indeed, and at present the wheat and other grain crops generally promise to be abundant.

QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES.	Mean Pressure of the Atmosphere of Dry Air reduced to the Level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of the Ther- mometer.	WIND.		Mean Amount of Cloud 0-10.	RAIN.		Mean Weight of Va- pour in a Cubic Foot of Air.	Mean additional weight of Vapour required to satu- rate a Cubic Foot of Air.	Mean Degree of Hu- midity.	Mean whole amount of Water in a Ver- tical Column of Atmosphere.
						Mean estimated Strength 0-6.	General Direction.		Number of Days on which it fell.	Amount Col- lected.				
Helston .....	29.551	51.3	74.0	29.0	45.0	1.3	s.w.	5.6	30	In. 7.2	Gr. 4.0	0.5	0.865	In. 4.9
Falmouth .....	..	50.4	69.0	32.0	37.0	2.0	Variable.	7.1	44	9.4	..	..	..	..
Truro .....	..	50.5	69.0	34.0	35.0	1.1	s.w. & n.w.	6.0	47	10.6	..	..	..	..
Woodfield, Devon .....	29.642	52.7	75.0	31.0	44.0	2.2	s.w. & n.e.	..	39	5.1	3.7	0.7	0.767	4.5
Exeter .....	..	51.5	77.0	30.0	47.0	..	n. & w.	..	28	6.1	..	..	..	..
Brighton, Black Rock ..	29.650	50.4	76.0	28.0	48.0	..	s.w. & n.e.	5.1	30	..	3.7	0.7	..	4.4
Chichester .....	29.509	50.8	77.0	30.0	47.0	..	Variable.	..	..	4.0	..	..	..	4.6
Uckfield .....	(29.707)	52.4	87.0	23.0	64.0	..	s.w. & w.	..	31	4.1	3.9	0.6	0.745	4.7
Saffron Walden .....	..	51.2	85.0	20.0	65.0	3.1	n.w. & n.e.	5.3	56	4.4	..	..	..	..
Beckington, Somerset ..	29.650	51.5	84.0	19.0	65.0	2.3	s.w.	5.0	43	5.6	3.8	0.5	0.846	4.6
Rl. Observ., Greenwich ..	29.602	53.2	85.3	24.3	61.0	..	s.w.	6.5	..	4.5	3.7	0.7	0.765	4.4
Lewisham .....	..	52.1	87.0	24.0	63.0	..	s.w.	7.0	..	..	3.6	0.6	0.742	4.3
Walworth, Surrey .....	..	52.0	84.0	27.0	57.0	1.4	s.w.	5.3	41	3.5	3.7	0.6	0.780	4.5
Pool Cottage, Hereford ..	..	50.2	..	..	..	1.6	Variable.	(1.6)	36	7.4	..	..	..	..
Cardington, nr. Bedford ..	..	51.0	78.0	28.0	50.0	..	Variable.	..	38	6.1	3.8	0.8	0.825	4.6
Cambridge Observatory ..	29.672	52.3	79.9	25.8	54.1	0.2	Variable.	6.0	46	5.6	..	..	..	..
Empingham .....	..	51.1	..	..	..	..	s.w. & n.w.	..	59	6.6	3.5	0.8	0.774	4.2
Derby .....	..	49.8	81.0	24.0	57.0	..	Variable.	..	45	9.2	..	..	..	..
Highfield House .....	..	53.1	84.5	28.0	56.5	2.8	w.	..	55	8.3	4.1	0.6	0.697	5.0
Liverpool Observatory ..	29.575	51.9	75.2	30.2	45.0	1.2	s.w. & n.w.	5.3	48	6.7	3.3	1.2	0.836	4.1
Whitehaven .....	..	49.9	79.0	29.0	50.0	1.9	s.w. & n.w.	6.6	41	8.9	3.6	0.7	0.894	4.3
Durham .....	29.572	47.9	75.0	27.8	47.2	1.9	..	5.9	37	5.2	3.6	0.4	0.836	4.3
Newcastle .....	..	47.6	74.5	30.0	44.5	..	s.w. & s.e.	..	40	5.3	3.9	0.3	..	..
North Shields .....	..	48.2	72.0	31.5	40.5	..	Variable.	..	58	..	..	..	..	..
No. of Column .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14



From the numbers in the first column it appears that the volume of air at those places situated near the western coast was less than it was in the interior of the country. At Brighton the reverse appears to have been the case, but I do not know whether any other correction has been applied to the readings of this instrument than that for the expansion of the mercury in the tube; and none of the instruments used near the coast have been compared with standards, so that from the preceding results, I can only infer that such seems to be the case. The mean of all the results in the first column, except that of Uckfield is 29·603 inches, and this may be considered as the pressure of dry air for England, during the quarter ending June 30, 1847.

From the numbers in the second column, we find for the quarter ending June 30, 1847, that the mean temperature of the counties of Cornwall and Devonshire was 51°3, and for the remaining counties, excepting those N. of latitude 54°, was 51°4, and that the mean temperature of Durham, Newcastle, and North Shields was 47°9.

The range of the temperature has been different in different places, according to their latitude and locality. At all places situated near the sea it has been very much smaller than at those places having the same, or even more northern latitude, but situated inland. The average quarterly range in Cornwall and Devonshire was 41°6, but at two of the stations it was 4° and 6° respectively, smaller than this amount. At all places in England, south of latitude 52°, excepting those in the vicinity of the sea, the range was the greatest, being 62°5, and it was within this space the highest and lowest readings in the quarter occurred, being 87° and 19° respectively. The extreme range of temperature in England during the quarter was therefore 68°. The average range of those places situated between the latitude 52° and 55° was about 56°. Between 53° and 54° there was no station, and at about 55° it seems to have been about 43° only.

As far as we can infer from the numbers in the sixth column, it would seem that the velocity of the wind has been nearly uniform throughout the country, (the number at Cambridge is evidently erroneous); and from the seventh column we find that the mean direction has been S.W. From the numbers in the eighth column the distribution of cloud has been nearly the same at all parts of the country, and such as to cover less than three-fifths of the whole sky.

The fall of rain has been the largest in the counties of Cornwall and Devon, yet the amounts collected at Hereford, Derby, Nottingham, and Whitehaven have been nearly as large. At nearly all the other places the amount is about one-half of that of those places. Near the southern coast the fall has been the smallest in amount.

The weight of vapour in a certain mass of air was the greatest near the sea-coast, and the additional quantity required to saturate the same mass of air was the smallest at those places; also the degree of humidity was the greatest, and the water held in solution was consequently the largest. At places inland the reverse of the above results is generally shown, and where it is not it arises from the dry and wet bulb thermometers not being good, or improperly placed, and such appears to be particularly the case at Beckington, Cambridge, Highfield House, Newcastle, and North Shields.

The average weight of a cubic foot of air was about 533 grains.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 10th October, 1846 and 1847; showing the Increase or Decrease thereof.—(Continued from page 285.)*

Sources of Revenue.	Years ending 10th October.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,150,933	18,418,157	267,224	....
Excise .....	12,251,932	12,092,018	....	159,914
Stamps .....	6,983,129	7,135,378	152,249	....
Taxes.....	4,238,560	4,329,677	91,117	....
Property Tax .....	5,332,157	5,438,453	106,296	....
Post Office.....	802,000	859,000	57,000	....
Crown Lands.....	115,000	67,000	....	48,000
Miscellaneous .....	1,324,548	202,837	....	153,208
Total Ordinary Revenue ...	49,198,259	48,542,520	673,886	361,122
China Money .....	....	....	....	968,503
Imprest and other Moneys .	224,747	217,912	....	6,835
Repayments of Advances....	1,172,141	792,447	....	379,694
Total Income.....	50,595,147	49,552,879	673,886	1,716,154
	Deduct Increase .....			673,886
	Decrease on the Year .....			1,042,268

Sources of Revenue.	Quarters ending 10th October.			
	1846.	1847.	Increase.	Decrease.
	£	£	£	£
Customs .....	5,310,835	4,936,644	....	374,191
Excise .....	4,181,926	3,539,946	....	641,980
Stamps .....	1,774,364	1,707,945	....	66,419
Taxes.....	209,940	213,885	3,945	....
Property Tax.....	1,972,128	1,918,645	....	53,483
Post Office.....	217,000	222,000	5,000	....
Crown Lands.....	45,000	....	....	45,000
Miscellaneous .....	405,554	73,126	....	104,784
Total Ordinary Revenue ...	14,116,747	12,612,191	8,945	1,285,857
China Money .....	....	....	....	227,644
Imprest and other Moneys	33,815	43,537	9,722	....
Repayments of Advances....	199,882	187,486	....	12,396
Total Income.....	14,350,444	12,843,214	18,667	1,525,897
	Deduct Increase .....			18,667
	Decrease on the Quarter.....			£1,507,230

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 10th Oct., 1847, was 13,774,031*l.* The total charge upon it was 7,791,665*l.*, leaving a surplus of 5,982,366*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ending 5th July, 1847, and paid off out of the growing produce of that fund for the quarter ending 10th Oct. 1847, after deducting 670,000*l.* paid off out of the Sinking Fund, was 126,939*l.*

The surplus of revenue, after providing for the charges on the Consolidated Fund, and the payment of Supply Services, in the quarter ending 10th October, 1847, was 729,195*l.*



CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Third Quarter of 1847; together with the Average Prices for the whole Quarter.—(Continued from p. 286.)

Returns received at the Corn Office, 1847.			Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
			Weekly Average	Aggregate Average of Six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending 1847.			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
July	3	.....	87 1	93 6	51 11	32 10	65 0	54 9	56 8
	10	.....	82 3	90 2	48 8	31 11	61 9	53 0	55 10
	17	.....	74 0	85 10	46 11	29 7	67 9	52 1	53 8
	24	.....	75 6	83 8	45 8	30 5	59 1	51 6	53 0
	31	.....	77 3	81 3	45 3	31 1	57 1	54 8	46 6
August	7	.....	75 5	78 7	43 11	31 1	52 2	54 1	47 5
	14	.....	66 10	75 3	40 7	29 1	40 2	54 5	42 10
	21	.....	62 6	71 11	38 11	28 9	35 5	53 2	40 4
	28	.....	60 4	69 8	37 9	27 4	34 7	53 3	39 11
Sept.	4	.....	56 8	66 6	36 3	25 5	33 9	51 10	42 1
	11	.....	51 4	62 2	33 1	24 7	32 4	47 7	43 2
	18	.....	49 6	57 10	32 1	22 5	33 2	42 11	41 1
	25	.....	53 6	55 8	31 10	23 0	35 2	42 5	44 4
Average of the Quarter }			67 1	74 9	40 11	28 3	46 8	51 2	46 8

Foreign and Colonial Wheat and Flour imported in each of the Months ending 5th July, 5th August, and 5th September, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them.—(Continued from p. 286.)

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th July	195,236	1,765	197,004	195,290	1,766	197,056	5,733	25	5,758
5th Aug.	388,579	20,971	409,550	388,580	20,971	409,551	5,733	25	5,758
5th Sept.	403,501	36,082	439,583	403,501	36,082	439,583	5,733	25	5,758

WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th July	451,656	11,362	463,018	450,624	11,362	461,986	21,117	2,118	23,236
5th Aug.	582,976	73,196	656,172	582,983	73,196	656,179	21,111	2,118	23,229
5th Sept.	1,005,928	357,978	1,363,906	1,006,362	357,978	1,364,340	20,677	2,118	22,795

## CURRENCY.

## BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 24th July, the 21st August, and the 18th September, 1847.—(Continued from p. 287.)*

## ISSUE DEPARTMENT.

	Weeks ending		
	24th July, 1847	21st Aug., 1847.	18th Sept., 1847
	£	£	£
Notes issued .....	23,119,150	22,614,940	22,205,405
Government Debt .....	11,015 100	11,015,100	11,015,100
Other Securities.....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion .....	7,790,384	7,545,734	7,182,375
Silver Bullion.....	1,328,766	1,069,206	1,023,030
Total.....	23,119,150	22,614,940	22,205,405

## BANKING DEPARTMENT.

Proprietors' Capital .....	14,553,000	14,553,000	14,553,000
Rest .....	3,596,877	3,734,352	4,020,878
Public Deposits .....	4,503,516	6,830,836	8,749,178
Other Deposits .....	8,326,425	6,931,036	7,185,073
Seven Day and other Bills ....	849,640	816,159	816,722
Total.....	31,829,458	32,865,383	35,324,851
Government Securities, including } Dead Weight Annuities .... }	11,636,340	11,636 340	11,636,340
Other Securities.....	15,325,476	16,116,345	18,740,486
Notes .....	4,216,445	4,488,020	4,272,940
Gold and Silver Coin .....	651,197	624,678	675,085
Total.....	31,829,458	32,865,383	35,324,851

## COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 19th June, 17th July, and 14th August, 1847.—(Continued from p. 287.)*

Banks.	19th June, 1847.	17th July, 1847.	14th Aug. 1847.
England—Private Banks .....	4,386,282	4,339,088	4,258,380
Joint Stock Banks .....	3,088,442	3,034,021	2,991,351
Scotland—Chartered, Private, and } Joint Stock Banks..... }	3,647,314	3,495,921	3,455,651
Ireland—Bank of Ireland.....	3,327,400	3,232,475	3,107,100
Private and Joint Stock } Banks..... }	2,137,551	2,024,903	1,990,115
Total.....	16,586,989	16,126,408	15,802,597



## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending September 30, 1847; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 288.)*

COUNTIES.	July.	August.	Sept.	TRADES.	July.	August.	Sept.
Metropolis.....	26	23	34	<i>Agriculture and connected Trades.</i>			
Bedford .....	1	1	....	Farmers .....	1	1	1
Berks .....	....	....	....	Agricultural Implement Makers, &c. ....	....	1	3
Bucks.....	....	....	....	Corn Factors .....	1	....	2
Cambridge .....	2	4	....	Millers and Malsters .....	1	2	2
Cheshire .....	2	1	1	Hop Merchants .....	....	....	....
Cornwall .....	....	....	....	Brewers .....	2	4	5
Cumberland .....	....	....	....	Horse and Cattle Dealers, and Woolstaplers .....	4	1	....
Derby .....	1	2	2	<i>Mining and connected Trades.</i>			
Devon .....	5	1	1	Mining Firms .....	....	....	....
Dorset .....	....	....	1	Blasting Works .....	....	1	....
Durham.....	3	1	2	<i>Manufactures.</i>			
Essex.....	2	2	....	Woollen Manufacturers .....	3	3	1
Gloucester.....	4	2	4	Cotton .....	4	2	....
Hants.....	3	5	2	Linen .....	....	3	1
Hereford .....	....	2	1	Silk .....	1	1	1
Hertford .....	....	....	....	Printers and Dyers .....	....	....	....
Huntingdon .....	....	....	....	Lace Manufacturers .....	....	....	1
Kent .....	2	1	3	Hosiery .....	....	3	5
Lancashire.....	20	18	21	Hardware .....	6	1	8
Leicester .....	2	3	....	Earthenware .....	1	....	....
Lincoln .....	....	1	....	Glass .....	2	....	1
Middlesex (exclusive of the Metropolis) }	5	6	12	Paper .....	....	2	2
Monmouth.....	1	....	1	Builders .....	13	5	7
Norfolk .....	1	2	2	Miscellaneous Manufacturers....	16	20	23
Northampton.....	....	....	....	<i>Commerce.</i>			
Northumberland .....	....	3	2	Bankers and Merchants .....	4	8	12
Nottingham .....	4	3	2	Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally .....	4	2	6
Oxford .....	1	....	....	<i>Retail and Handicraft Trades.</i>			
Rutland.....	....	1	....	Bakers .....	3	2	3
Salop .....	....	....	....	Butchers .....	1	....	1
Somerset (including Bristol) }	5	3	3	Corn and Hay Dealers .....	....	2	....
Stafford .....	....	1	2	Innkeepers and Victuallers.....	10	6	17
Suffolk .....	4	2	2	Wine and Spirit Merchants ....	4	4	....
Surrey (exclusive of the Metropolis) }	8	....	1	Dealers in Grocery, Drugs, and Spices.....	20	14	7
Sussex .....	....	2	2	Makers of, and Dealers in, Clothing .....	8	3	8
Warwick .....	5	3	9	Makers of, and Dealers in, Furniture .....	....	....	2
Westmoreland .....	....	....	1	Coach Builders .....	2	1	2
Wilts .....	1	2	3	Miscellaneous .....	11	15	7
Worcester .....	1	2	2				
York (East Riding) ....	7	3	....				
„ (North Riding) .....	1	....	3				
„ (West Riding) ....	2	6	8				
Wales.....	3	1	2				
Total .....	122	107	128	Total.....	122	107	128

# INDEX TO VOL. X.

	Page		Page
AGRA Government, or North-Western Provinces of India, Revenue Statistics of, by Lieut.-Colonel W. H. Sykes, V.P.R.S. ....	243	Consolidated Fund, Operations in the Quarter ended January 5, 1847	39
BANK of England, On the Accounts of, under the operation of the Act 7 & 8 Vict., c. 32, by J. T. Danson, Esq., F.S.S., of the Middle Temple ....	132	— Ditto April 5, 1847 ....	189
Bank of England, <i>see</i> Currency.		— Ditto July 5, 1847 ....	285
Bankruptcies in England and Wales, in each Month of the Quarter ending December 31, 1846, showing the Counties and Branches of Industry in which they have occurred	96	— Ditto October 10, 1847....	373
— Ditto Quarter ended March 31, 1847 ....	192	Corn, Average Prices of, during each Week of the last Quarter of 1846, with the Average Prices for the whole Quarter ....	94
— Ditto Quarter ended June 31, 1847 ....	288	— Ditto during First Quarter of 1847 ....	190
— Ditto Quarter ended September 31, 1847 ....	376	— Ditto during Second Quarter of 1847 ....	286
Banks, Country, <i>see</i> Country Banks.		— Ditto during Third Quarter of 1847 ....	374
Belgium, Review of the Mines and Mining Industry of, by Richard Valpy, Esq., F.S.S. ....	70	Crime, Statistics of, in England and Wales from 1839 to 1843, by the Rev. Whitworth Russell, F.S.S....	38
British Association, Sixteenth Meeting of, at Southampton, Proceedings of the Statistical Section ....	187	Currency, Bank of England, Account for the Weeks ending October 17, November 14, and December 12, 1846 ....	94
— Seventeenth Meeting at Oxford, by the same....	269	— Ditto Weeks ending January 9, February 6, and March 6, 1847....	191
Billing, John, Esq., F.S.S., Architect, Statistics of the Sanitary Condition of the Borough of Reading....	259	— Ditto Weeks ending April 3, May 1, May 29, and June 26, 1847	287
CEREALIA, Prices of the, and other Edibles in India and England compared, by Lieut.-Colonel W. H. Sykes, V.P.R.S. ....	289	— Ditto Weeks ending July 24, August 21, and September 18, 1847 ....	375
Charitable Dispensaries of India, Government of, chiefly in the Bengal and North-West Provinces, by Lieut.-Colonel W. H. Sykes, V.P.R.S. ....	1	Country Banks, Average Aggregate of Promissory Notes circulating in the United Kingdom 95, 191, 287, 375	
		DANSON, J. T., Esq., F.S.S., of the Middle Temple, On the Accounts of the Bank of England under the operation of the Act 7 & 8 Vict., c. 32 ....	132
		EAST India Company's Armies in India, European and Native, Vital Statistics of, by Lieut.-Colonel W. H. Sykes, V.P.R.S. ....	101



	Page		Page
Education, the influence of, shown by facts recorded in the Criminal Tables for 1845 and 1846, by G. R. Porter, Esq., F.R.S. ....	316	Mines and Mining Industry of Belgium, a Review of, by Richard Valpy, Esq., F.S.S. ....	70
Educational and Moral Statistics of England and Wales, by Joseph Fletcher, Esq., Barrister-at-Law, Hon. Sec. Statistical Society of London ....	193	Moral and Educational Statistics of England and Wales, by Joseph Fletcher, Esq., Barrister-at-Law, Hon. Sec. Statistical Society of London ....	193
Education in the Mining and Manufacturing District of South Staffordshire; being a Report to the Council of the Statistical Society of London, by its Secretaries ....	234	Mortality among Her Majesty's Troops serving in the Colonies during the years 1844 and 1845, by Lieut.-Col. A. M. Tulloch, F.S.S. ....	252
FLETCHER, Joseph, Esq., Barrister-at-Law, Hon. Sec. Statistical Society of London. Moral and Educational Statistics of England and Wales, by ....	193	Mortality in 117 of the districts of England, Quarterly Reports of ....	90, 278, 364
— Statistical Account of the Markets of London, by ....	345	PAUPER Lunacy and Poor's Rate Statistics ....	266
GLAISHER, James, Esq., Remarks on the Weather during the Quarter ending March 31, 1847 ....	284	Poor's Rate and Pauper Lunacy Statistics ....	266
— ending June 30, 1847 ....	369	Porter, G. R., Esq., F.R.S., The Influence of Education, shown by facts recorded in the Criminal Tables for 1845 and 1846 ....	316
Guy, W. A., M.B., Hon. Sec., Statistical Society of London, on the Duration of Life of Sovereigns ....	62	Prussia, Statistics of, by B. Hebel, Esq., K.C.R.E., F.S.S., His Prussian Majesty's Consul-General ....	154
HEALTH, Public, State of, in the Quarter ending—		READING, Sanatory Condition of the Borough of, by John Billing, Esq., F.S.S., Architect ....	259
December, 1846 ....	84	Revenue, Abstract of the Net Produce of, in the Years and Quarters ending 5th January, 1846 and 1847, showing the Increase or Decrease thereof ....	93
March, 1847 ....	270	— in the Years and Quarters ending 5th April, 1846 and 1847 ....	189
June, 1847 ....	361	— 5th July, 1846 and 1847 ....	285
Hebel, B., Esq., K.C.R.E., F.S.S., Statistics of Prussia, by ....	154	— 10th October, 1846 and 1847. ....	373
LIFE of Sovereigns, On the Duration of, &c., by W. A. Guy, Esq., M.B., Hon. Sec. Statistical Society of London ....	62	Revenue Statistics of the Agra Government and North Western Provinces of India, by Lieut.-Colonel W. H. Sykes, V.P.R.S. ....	243
Lunacy, Pauper, and Poor's Rate Statistics ....	266	Railways, Table showing the Revenue Receipts, Increase of Traffic, Dividends, &c., on various Railways, for the half-year ending December, 1846, by James Wishaw, Esq. ....	262
METEOROLOGY, Quarterly Tables furnished to the Registrar-General by the Astronomer-Royal ....	92, 280, 368	Russell, Rev. Whitworth, F.S.S, Abstract of the Statistics of Crime in England and Wales from 1839 to 1843 ....	38
—, Quarterly Meteorological Table ....	283, 371		
Metropolis, Deaths in, Quarterly Reports of ....	91, 279, 265		

	Page		Page
SANATORY Condition of the Borough of Reading, by John Billing, Esq., F.S.S., Architect....	259	Fellows Elected—	
Savings' Banks, Summary of in Eng- land and Wales ....	266	Parsons, Samuel, M.D. ....	268
Sovereigns, On the Duration of Life of, by W. A. Guy, M.B., Hon. Sec. Statistical Society of London ....	62	Gray, Thomas, Esq. ....	268
Statistical Account of the Markets of London, by Joseph Fletcher, Esq., Barrister-at-Law, Hon. Sec. Statistical Society of London ....	345	Durham, P. F., Esq. ....	268
Statistical Society of London.		Burls, Chas, jun., Esq. ....	268
Thirteenth Annual Report, 1846-47. ....	97	Sykes, Lieut.-Colonel W. H., V.P.R.S., Government of the Charitable Dispensaries of India, chiefly in the Bengal and North- Western Provinces, by ....	1
Abstract of Receipts and Ex- penditure ....	99	— Vital Statistics of the East India Company's Armies in India, European and Native, by ....	100
Second Ordinary Meeting, 1846-47, Dec., 1846 ....	188	— Revenue Statistics of the Agra Government or North-Western Provinces of India, by....	243
Third ditto, January, 1847 ....	188	— Prices of the Cerealia and other Edibles in India and England compared, by ....	289
Fourth ditto, February, 1847....	188	TULLOCH, Lieut.-Col., A.M., F.S.S., On the Mortality among Her Ma- jesty's Troops serving in the Colonies during the Years 1844 and 1845, by ....	252
Fifth ditto, March, 1847 ....	268	VALPY, Richard, Esq., F.S.S., Review of the Mines and Mining Industry of Belgium ....	70
Sixth ditto, April, 1847 ....	268	Vital Statistics of the East India Company's Armies in India, European and Native, by Lieut.- Colonel W. H. Sykes, V.P.R.S....	100
Seventh ditto, May, 1847 ....	268	WEATHER, Remarks on the, during the Quarter ending March 31, 1847, by James Glaisher, Esq. ....	281
Eighth ditto, June, 1847 ....	268	— June 30, 1847 ....	369
Fellows Elected—		Wheat and Wheat Flour, Quantities imported ....	94, 190, 286, 374
Neild, William, Esq. ....	188	Whishaw, James, Esq., F.S.S., Table showing the Revenue, Receipts, Increase of Traffic, Dividends, &c., on various Railways for the Half- Year ending December, 1846, by	262
Le Cappelain, John, Esq ....	188		
Scratchley, Arthur, Esq ....	188		
Hammack, James T., Esq....	188		
Clutterbuck, Robert, Esq....	188		
Billing, John, Esq. ....	188		
Shirreff, Colonel James ....	188		
Braysher, John, Esq. ....	188		
Newmarch, William, Esq....	268		
Lyne, Lewis Stephens, Esq..	268		
Longman, Thomas, Esq. ....	268		
Alexander, G. W., Esq. ....	268		
Mouat, Frederick J., M.D....	268		
Brooke, William, Esq. ....	268		



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# CONTENTS TO VOL. X. PART I.

	Page
Statistics of the Government Charitable Dispensaries of India, chiefly in the Bengal and North-Western Provinces. By LIEUT.-COLONEL W. H. SYKES, V.P.R.S. ....	1
Appendix .....	36
Abstract of the "Statistics of Crime in England and Wales, from 1839 to 1843." By The Rev. WHITWORTH RUSSELL .....	38
On the Duration of Life of Sovereigns. By WILLIAM A. GUY, M.B., Cantab.; Fellow of the Royal College of Physicians; Professor of Forensic Medicine, King's College; Physician to King's College Hospital; Honorary Secretary to the Statistical Society, &c. ....	62
A Review of the Mines and Mining Industry of Belgium. By RICHARD VALPY, Esq. Founded on the Report of the Minister of Public Works to the King, dated Brussels, 1st June, 1842 .....	70
MISCELLANEOUS :—	
State of the Public Health in the Last Quarter of the Year 1846 .....	84
Quarterly Table of the Mortality in 115 of the principal Districts (including the principal Towns) of England and Wales .....	90
Mortality of the Metropolis .....	91
Quarterly Meteorological Table .....	92
An Abstract of the Net Produce of the Revenue of Great Britain, in the Years and Quarters ending 5th January, 1846 and 1847; showing the Increase or Decrease thereof .....	93
Consolidated Fund Operations .....	93
Average prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign and Colonial Wheat during each Week of the Fourth Quarter of 1846; together with the Average Prices for the whole Quarter .....	94
Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 10th October, 5th November, and 5th December, 1846; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them .....	94
Weekly Return from the Issue and Banking Departments of the Bank of England, for the Weeks ending 17th October, 14th November, and 12th December, 1846 .....	95
Average Aggregate Amount of Promissory Notes of Country Banks which have been in Circulation in the United Kingdom during the Weeks ending 17th October, 14th November, and 12th December, 1846 .....	95
An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending December 1st, 1846; showing the Counties and branches of Industry in which they have occurred .....	96





## CONTENTS TO VOL. X. PART II.

	Page
Thirteenth Annual Report of the Statistical Society of London. Session 1846-47 .....	97
Vital Statistics of the East India Company's Armies in India, European and Native. By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society .....	100
On the Accounts of the Bank of England under the Operation of the Act 7 & 8 Vict., c. 32. By J. T. DANSON, Esq., F.S.S., of the Middle Temple .....	132
Statistics of Prussia. By BERNARD HEBELER, Esq., K.C.R.E., F.S.S., His Prussian Majesty's Consul-General .....	154
MISCELLANEOUS :—	
Sixteenth Meeting of the British Association for the Advancement of Science, at Southampton, September 10th—15th, 1846. Proceedings of the Statistical Section .....	187
Proceedings of the Statistical Society of London .....	188
An Abstract of the Net Produce of the Revenue of Great Britain, in the Years and Quarters ending 5th April, 1846 and 1847; showing the Increase or Decrease thereof .....	189
Consolidated Fund Operations .....	189
Average prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat during each Week of the First Quarter of 1847; together with the Average Prices for the whole Quarter .....	190
Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th January, 5th February, and 5th March, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them .....	190
Weekly Return from the Issue and Banking Departments of the Bank of England, for the Weeks ending 9th January, 6th February, and 6th March, 1847 .....	191
Average Aggregate Amount of Promissory Notes of Country Banks which have been in Circulation in the United Kingdom during the Weeks ending 2nd January, 30th January, and 27th February, 1847.....	191
An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending March 31st, 1847; showing the Counties and branches of Industry in which they have occurred .....	192





# CONTENTS TO VOL. X. PART III.

	Page
Moral and Educational Statistics of England and Wales. By JOSEPH FLETCHER, Esq., Barrister at Law, Hon. Sec. Statistical Society of London.....	193
Education in the Mining and Manufacturing District of South Staffordshire; being a Report to the Council of the Statistical Society of London by its Secretaries .....	234
Revenue Statistics of the Agra Government, or North-Western Provinces. By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society ....	243
On the Mortality among Her Majesty's Troops serving in the Colonies during the Years 1844 and 1845. By LIEUT.-COL. A. M. TULLOCH, F. S. S. ....	252
Statistics of the Sanitary Condition of the Borough of Reading. By JOHN BILLING, Esq., F. S. S., Architect .....	259
A Table showing the Revenue Receipts, Increase of Traffic, Dividends, &c., on Railways for the half-year ending in Dec., 1846. By J. WHISHAW, Esq. ....	262
Summary of Savings' Banks in England, Scotland, Wales, and Ireland .....	266
Pauper Lunacy and Poor's Rate Statistics.....	266
MISCELLANEOUS :—	
Proceedings of the Statistical Society of London .....	268
Seventeenth Annual Meeting of the British Association for the Advancement of Science, held at Oxford, 23rd—30th June, 1847. Statistical Section ....	269
State of the Public Health in the First Quarter of the Year 1847 .....	270
Quarterly Table of the Mortality in 115 of the principal Districts (including the principal Towns) of England and Wales.....	278
Mortality of the Metropolis .....	279
Quarterly Meteorological Table .....	280
Remarks on the Weather during the Quarter ending March 31st, 1847. By JAMES GLAISHER, Esq., of the Royal Observatory Greenwich .....	281
Quarterly Meteorological Table .....	283
An Abstract of the Net Produce of the Revenue of Great Britain, in the Years and Quarters ending 5th July, 1846 and 1847; showing the Increase or Decrease thereof .....	285
Consolidated Fund Operations .....	285
Average prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat during each Week of the Second Quarter of 1847; together with the Average Prices for the whole Quarter .....	286
Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th April, 5th May, and 5th June, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them .....	286
Weekly Return from the Issue and Banking Departments of the Bank of England, for the Weeks ending 3rd April, 1st May, 29th May, and 26th June, 1847 .....	287
Average Aggregate Amount of Promissory Notes of Country Banks which have been in Circulation in the United Kingdom during the Weeks ending 27th March, 24th April, and 22nd May, 1847 .....	287
An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending June 30th, 1847; showing the Counties and branches of Industry in which they have occurred .....	288





## CONTENTS TO VOL. X. PART IV.

	Page
Prices of the Cerealia and other Edibles in India and England compared. By LIEUT.-COLONEL W. H. SYKES, Vice-President of the Royal Society ....	289
The Influence of Education, shown by facts recorded in the Criminal Tables for 1845 and 1846. By G. R. PORTER, Esq., F.R.S. ....	316
Statistical Account of the Markets of London. By JOSEPH FLETCHER, Esq., Barrister-at-Law, Honorary Secretary, Statistical Society of London.....	345
MISCELLANEOUS :—	
State of the Public Health in the Second Quarter of the Year 1847 .....	361
Quarterly Table of the Mortality in 117 of the principal Districts (including the principal Towns) of England and Wales.....	364
Mortality of the Metropolis .....	365
Prices of Provisions, Fuel, &c. ....	366
Quarterly Meteorological Table .....	368
Remarks on the Weather during the Quarter ending June 30th, 1847. By JAMES GLAISHER, Esq., of the Royal Observatory Greenwich .....	369
Quarterly Meteorological Table .....	371
An Abstract of the Net Produce of the Revenue of Great Britain, in the Years and Quarters ending 10th October, 1846 and 1847; showing the Increase or Decrease thereof .....	373
Consolidated Fund Operations .....	373
Average prices of Corn per Imperial Quarter in England and Wales, during each Week of the Third Quarter of 1847; together with the Average Prices for the whole Quarter .....	374
Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th July, 5th August, and 5th September, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them .....	374
Weekly Return from the Issue and Banking Departments of the Bank of England, for the Weeks ending 24th July, 21st August, and 18th Sep- tember, 1847 .....	375
Average Aggregate Amount of Promissory Notes of Country Banks which have been in Circulation in the United Kingdom during the Weeks ending 19th June, 17th July, and 14th August, 1847 .....	375
An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending September 30th, 1847; showing the Counties and branches of Industry in which they have occurred .....	376
Index .....	377











